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GEORGE F. STONE.

The grain dealers of the country are more familiar with no name than that of the versatile secretary of the Chicago Board of Trade—George F. Stone, whose portrait is presented on this page. The primary function of boards of trade, as Mr. Stone told the Senate Sub-Committee on Agriculture in his usual concise and exact manner, "is to bring the buyer and seller together in the interest of fairness and equity, and to facilitate the marketing of products and merchandise, and to provide the means for their distribution to the consumers in different sections of the country and in different parts of the world. They are established to facilitate the speedy adjustment of business disputes, to inculcate the principles of equity and honor in the intercourse of merchants, and also to promote the industries of man."

It would be a difficult matter to draft a more comprehensive outline of the aim and purpose of the boards of trade even were pages devoted to the task. It is a clear and able exposition of the object of boards of trade and the relation they sustain to the industries of the country.

Mr. Stone was born in Newburyport, Mass., and before coming to Chicago was engaged in the grain trade in Boston, the style of the firm being Stone, Denny & Co. While there he was elected president of the Corn Exchange and served two years. Since July 1, 1884, he has filled with universal satisfaction the office of secretary of what is now the largest board of trade.

The Chicago Board of Trade has 1,900 members, and their trade amounts to over \$100,000,000 annually. It is natural and inevitable that with so large a membership and so great a business many complications should arise, and Mr. Stone is frequently called upon to advise members regarding intricate questions that arise between members, and often disputes and suits are avoided. This responsible position daily calls for a variety of responsible duties, all of which are discharged with recognized ability.

Mr. Stone has frequently represented the Chicago Board of Trade at the annual meetings of the National Board of Trade, where he has shown himself a strong

impromptu debater on the many economic subjects which come before that body. In his extemporaneous discussions as well as in his public addresses he has exhibited a broad, deep, discerning mind that is always guided by a strong sense of equity and liberality. Narrow minded on no subject and well posted

field of business. His address upon International Commercial Relations, delivered before the press delegates from Mexico several years ago, was considered an able and philosophical treatment of the subject and was widely circulated both in this country and Mexico. He delivered an address at the dedication of the Cincinnati Chamber of Commerce and at the dedication of the Boston Chamber of Commerce and at Decoration Day exercises in Massachusetts and at Evanston, his present home.

He is also secretary of the National Transportation Association, which is composed of the principal boards of trade of the country; its object being to guard the interests of all shippers, the small as well as the large, against the encroachments of the carriers.

When Mr. Stone became secretary of the Chicago Board of Trade the reports of the amount of grain stored in public warehouses at the close of each week were not issued until Thursday. Mr. Stone suggested that the reports be issued earlier, but the idea was scouted as being impossible. Through his efforts the day of issue was made earlier and earlier until now the public is supplied with this information Monday morning. Mr. Stone is a member of the Literary Club of Chicago, of the Sunset Club, of the Masonic fraternity, and of the Odd Fellows.

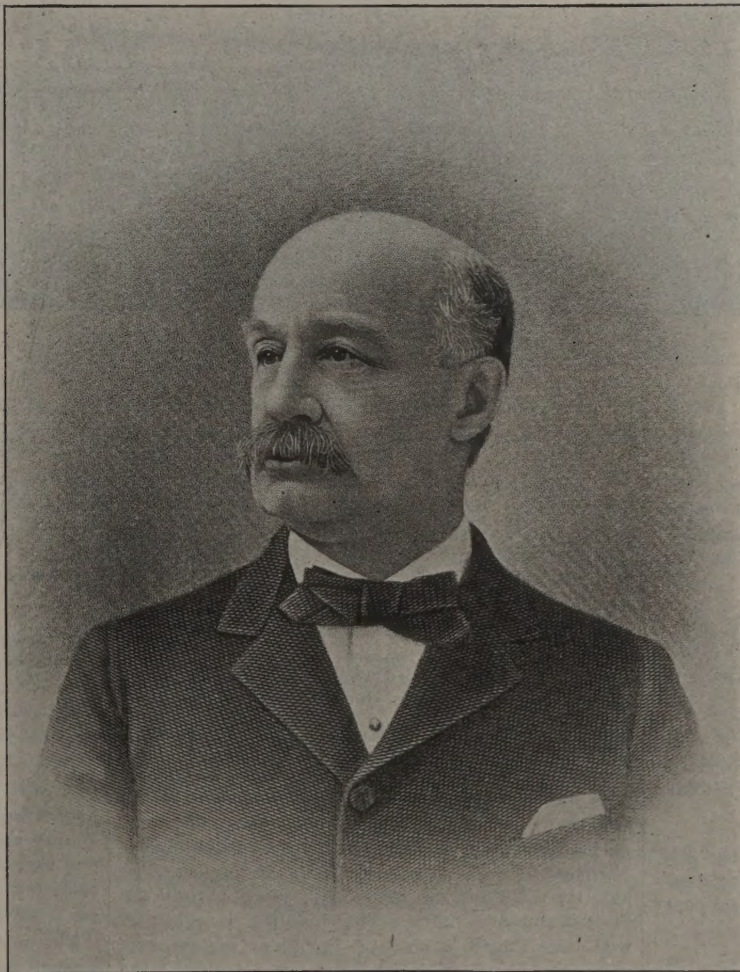
He is a ready and easy conversationalist. His accessibility and affability of address are appreciated by all who know him. In the discharge of his duties everyone is always treated courteously whatever their business may be.

His writings are notable for strength, terseness, clearness and forcibleness of expression. Each annual review bears witness that it was molded by a master hand. In none do we find better evidence of his liberality and of his ability to perceive

and to champion the cause of right than in his annual review for 1886.

His last annual review of the trade and commerce of Chicago, which has just come to hand, bristles with good things and will warrant careful perusal by anyone connected with the trade. In his introduction to the review Mr. Stone says:

"The year 1893 was in its commercial features al-



GEORGE F. STONE.

on all economic subjects, he is a sincere advocate of all that is essential to the advancement of the country and the trade and prosperity of Chicago. All his reports contain able reviews of economic subjects, subjects which are not alone of local importance, and his reports are highly valued by the members of other boards of trade for the valuable information contained regarding a wide

together exceptional. It opened with fair business prospects, and during its earlier months industries were conducted upon the same profitable basis as throughout the preceding year. In the early summer there was evident a pervading distrust in financial circles and a general disposition to restrict business and to abstain from new enterprises. This distrust assumed an alarming aspect and the stringency of the money market and the uncertainty of national financial and tariff legislation induced many industries to curtail their business and others to shut down. This threw a large number of men out of employment. The exceptional and serious situation addressed itself to the philanthropic and public spirited citizenship of the country, and the unemployed were provided with food and work to such an extent that there was, considering the gravity of the situation, comparatively little distress. The business and social interests of the country addressed themselves with a determined unanimity to the situation, and with remarkable alacrity conformed to the new conditions. Individual and business expenses were systematically and resolutely reduced. Obligations incurred by business men were to a gratifying extent, under existing circumstances, liquidated or extended. It is evidently the purpose of merchants not to change this policy but to address themselves for some time to come to the economical conduct of their business, and to discourage new projects until the financial situation has so far recovered and is to such a degree assured as to justify them in reopening their industries and in extending their operations. Permanent recovery must be gradual and along the line of universal persistent economy, and will be observed in relatively diminished imports, in the conservative conduct of business generally, in restricted purchases of luxuries, in cautious speculation and in the resumption of sound and careful business methods which have of late years too often been ignored. Under such a policy it is inevitable that confidence, which is the important thing to be accomplished, will be restored and manufacturing will be revived. Those thrown out of employment will find work, and money will again vitalize the great arteries of commerce."

During the decade Mr. Stone has occupied the office of secretary the Chicago Board of Trade has grown wonderfully in influence, and although many complicated questions and irritating differences have threatened to disrupt the Board, the spirit of fairness has generally gained the upper hand. That his ability is recognized and that his earnest efforts to treat all fairly and courteously are appreciated is attested by his annual reelection to the office.

Jimson says: "It's curus where farmers git such a pesky poor lot of scales nowadays, and I can't for the life of me see why they should all weigh heavier'n mine."—*Corrugations*.

Farmers of California are debating whether it would pay to turn the wheat crops into hay. Wheat at present commands but a low price and hay is scarce and proportionately expensive.

Mrs. Lease advised the farmers of Kansas to "raise more sheol and less corn," and a Jefferson county farmer who heeded her advice writes to a local paper that he is now about out of corn.

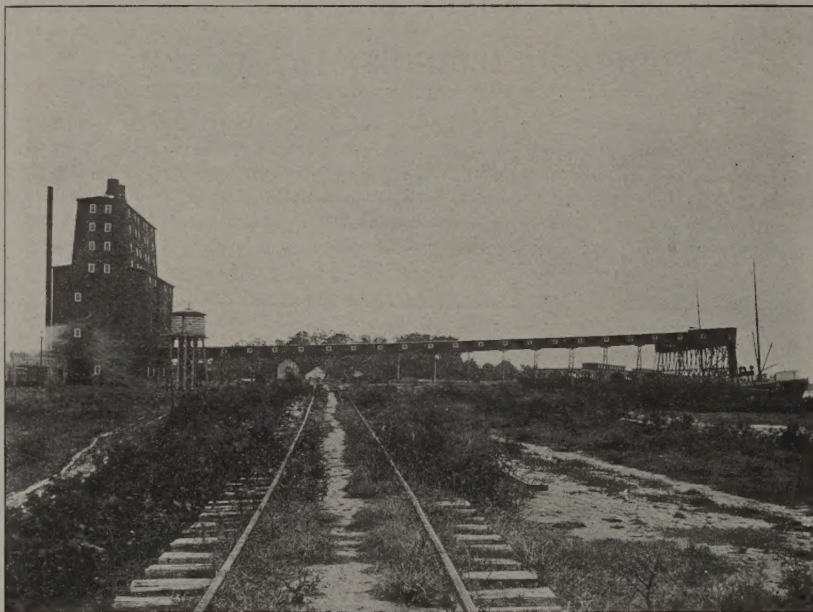
A Minneapolis firm proposes to buy cash wheat and hold it on the following conditions: Cost of carrying one-twentieth of 1 cent per bushel per day; trades to be margined 5 cents per bushel; commission $\frac{1}{2}$ cent per bushel. This involves risk of deterioration of quality, failure of elevator proprietors and consequent shortage of the wheat and failures of the buying firm without restoring the margin. This is one way of avoiding the Hatch bill.

THE WESTWEGO ELEVATOR AT WESTWEGO, LA.

The grain congress at Wichita, Kan., last month and the proposed grain congress at New Orleans June 12 are doing much to call attention to the different routes via gulf ports for export grain. The increased acreage in the Southwest, and especially in Oklahoma, foretells of an increased demand upon the grain-carrying facilities of the eastern railroads and of the evident necessity of seeking uncrowded and cheaper routes to the seaboard. The grain-handling facilities of gulf ports are increasing, and every year sees the inception of new enterprises, and renewed efforts are made to attract the export grain trade to the gulf routes.

The accompanying illustration represents an elevator at Westwego, La., on the Mississippi River, about two miles from New Orleans. It is owned and operated by the Texas & Pacific Terminal and Warehouse Company, Ltd., and is used in handling the export grain business arriving over the Texas & Pacific Railway.

The Westwego Elevator was built in 1892 by Jas. Stewart & Co., and remodeled and enlarged in 1893. It is one of the most complete and best equipped



THE WESTWEGO ELEVATOR AT WESTWEGO, LA.

houses in the South. The building is 65x140 feet, with four-story cupola. The storage capacity is 350,000 bushels. There are three receiving and three shipping legs. A 36-inch conveyor belt 475 feet long, with a carrying capacity of 15,000 bushels per hour, conveys grain to boats in the river. This is well shown in the illustration. The conveyor belt also runs parallel with the river for 315 feet, and is driven by 2,850 feet of 1 $\frac{1}{2}$ -inch transmission rope. There are nine iron spouts reaching from the conveyor to the vessel, which enables a vessel to be loaded without shifting it.

The building is supplied with freight and passenger elevator, which runs to the top of the building. It has six hopper scales of 1,000 bushels' capacity each, with garnerers of same capacity over each scale hopper. The elevators have a carrying capacity of 5,000 bushels each per hour. Cars are handled on the two tracks in the building by a steam car puller.

The power for running the elevator machinery is furnished by a 250-horse power Buckeye Engine. The building is lighted by electricity, using both incandescent and arc lights. The building is equipped with the Grinnell Automatic Sprinkler system, supplied from two 5,000-gallon water tanks on top of the elevator, which are kept filled by a large Blakeslee Duplex Pump. This pump also supplies water to a 3-inch standpipe, with 100 feet of 2 $\frac{1}{2}$ -inch hose connections on each floor. The water tank, which appears on the ground next to the elevator, has a capacity of 60,000 gallons, and has an elevation of 45 feet. It feeds the boilers and fire appliances in the lower part of the building. As a representative elevator

of the South, the illustration and preceding description speak well of southern enterprise in the grain business. The Texas & Pacific Terminal and Warehouse Company, Ltd., enjoy a good business and handle a large amount of grain yearly. The building, as shown, is conveniently located for handling grain from cars to vessels. Geo. W. Roth is superintendent and W. T. Heim, secretary.

RATES ON WHEAT BY CANAL.

Back in the forties as high as 50 cents a bushel was paid for carrying wheat from Buffalo to New York, while of late years the rate has often been down to 2 cents. Back in the forties westbound freight paid \$5 per net ton. Now the rate is only 40 cents per gross ton. This remarkable difference has been brought about through several causes, viz.:

The original Erie Canal boat carried only 70 tons; now a double boat carries 480 tons, and is steered by one man, the same as the 70-ton boat was. Years ago nearly all boats were owned by companies who hired Tom, Dick and Harry to run them; now nearly every fleet is run by its owner; the captain, his boys, and even his wife and daughters all take an interest in the successful management of their fleet.

True, the canals have been made free. The present boat owners do not pay 6 2-10 cents a bushel toll on wheat, as was paid by old-time companies. But this fact is insignificant when we consider that all old canal companies went broke and quit the business when the net rate on wheat got down to 15 cents a bushel, while now one-quarter of that sum is called a good freight. And all practical boat owners say that with nine feet of water in the Erie Canal, and both tiers of the locks lengthened, 3 cents would be a good paying rate.

Another important item is that years ago towing companies charged 35 cents per mile for towing boats. Now horse boatmen move their fleet at a cost of 10 cents a mile per boat, and the cost of fuel and engineers on the latest improved steamers to move their fleet is only 5 cents per mile per boat.

But the prospect of the Erie Canal being made capable of carrying the entire products of the Northwest to tidewater, and at half the rate any railroad corporation can live at, is more than the railroad magnates can endure. It begins to look as though new forces were to be applied to still greater reductions in the cost of moving canal boats, which may result in inducing the railroads to gracefully succumb to the inevitable.—*Canal Defender*.

The amount of old corn in the hands of producers in Illinois on May 1 has been estimated by the Department of Agriculture to be 41,000,000 bushels, as compared with 45,000,000 bushels on the corresponding date last year.

The ocean freight rates from New York to Liverpool which were in effect April 2, according to the Agricultural Department report, are as follows: Wheat and corn, 5 cents per bushel; flour, 24 cents per barrel; flour in sacks, per 2,240 pounds, \$2.40; oil cake per 2,240 pounds, \$2.40; hay, pressed in bales, per 2,240 pounds, \$7.80.

The bold rainmakers of Kansas bob up again as serenely as ever. On the affirmation of the Rock Island Railroad company that considerable moisture was precipitated in parts of that state last summer by the conjurations and explosions of Rainmaker Jewell, further attempts will be made this summer. Mr. Jewell uses metallic bombs filled with liquified carbonic acid gas which are exploded high in the air. The liquid instantly expands into gas "causing intense cold and precipitation."

THE KINGSTON AND MONTREAL FORWARDING COMPANY (LIMITED).

The late secretary of the Duluth Board of Trade declared that the transportation of grain by our railroads cost just seven times more than the transportation by water. Senator Davis is of the opinion that the seat of wealth and power shall finally rest upon the shores of these inland seas of America. The rise and supremacy of Chicago within the span of a single lifetime seems to sustain the senator's view, and to all people tributary to these great lakes the natural outlet via the St. Lawrence is a factor of the first magnitude. The transportation facilities offered by the Canadian waterways must always have an important influence on the commerce of the lakes, and Montreal is daily rising in rank as a competitor for the traffic of the Northwest and West.

The Kingston and Montreal Forwarding Company, working in connection with the Ogdensburg Transit Company, represent a combination of American and Canadian capital destined to lead the commerce of the West on its cheapest route to the sea. When the politicians of the two countries were doing their best over the question of the discrimination against American vessels in the Canadian canals, to obstruct the natural trade of the river and lakes, the Kingston and Montreal Forwarding Company headed an influential section of the Montreal Board of Trade in determined opposition to any such discrimination or obstruction to American trade. In this they were at one with the directors of the Chicago Board of Trade, who protested vigorously against any obstruction to trade on the part of either the United States or Canada. "Business, not politics," was the motto of these gentlemen interested in mutual trade.

Although last year was an unfortunate one in the grain trade, yet this company handled 7,000,000 bushels at the port of Montreal. The working condition and extent of its floating stock is such that if pushed to its present limit it has a carrying capacity of 20,000,000 of bushels. Grain arriving at either Kingston or Ogdensburg is taken in charge and held by this company subject to order until delivered on board the ocean steamer in the harbor of Montreal. Under their system the identity of the grain is preserved beyond misadventure. The cargo of the lakes arriving at Kingston is transferred by means of inexpensive floating elevators direct to lighters each of which has a carrying capacity of over 25,000 bushels, and delivered without further transfer to the ocean steamer at Montreal. When the identity of the grain is an object this is an invaluable consideration, and weights are guaranteed from the lake to the ocean carrier.

At Ogdensburg the occasional difficulty of making close connection with the ocean steamer at Montreal has been solved through the business arrangement with the Ogdensburg Transit Company. This company allows in its elevator 10 days' storage free to the Kingston and Montreal Forwarding Company on the through rate from the lake ports, and this through rate is figured "flat" with the lowest competing rates. In fact the gentlemen managing these two companies have solved the question of transportation via the St. Lawrence. They offer security, preservation of identity of cargo, speed and safety on to the ocean carrier on all grain intrusted to their care. Another important consideration to shippers is, that rates are fixed for the season. No fluctuations or anxiety about freights; these charges, as the laws of the Medes and Persians, "altereth not," and in the close competition of the Erie they represent the lowest rates to the sea.

The rates fixed for this season between Kingston and Montreal are 2½ cents on wheat and 2½ cents on corn, allowing a rebate of ½ cent a bushel if delivery is taken

within 48 hours after arrival in Montreal, or a through rate via Ogdensburg may be fixed at Chicago or Duluth on competing low terms. These specified charges cover all expenses of lightering, towing, elevating and final delivery free on board ocean steamer. The only other charges are the Montreal harbor expenses, amounting to about ½ cent a bushel.

This company was incorporated sixteen years ago with a capital of \$200,000, Mr. Alex. Gunn, Kingston, Ont., being the president; Mr. Frank Ross, Quebec, the vice-president; Mr. Wm. Stewart, managing director, Montreal; John Torrance, Jr., Montreal, and Hiram A. Calvin, M. P., Garden Island, Ont., directors, and Mr. James Stewart, agent, Kingston, Ont. They own several fine steamboats and have floating elevators at Portsmouth Harbor, Kingston, Ont. Freight consigned to points beyond the company's terminals is delivered in warehouses of connections immediately on arrival, thus guarding against delay. All goods are handled carefully at low rates, and insurance is promptly effected when required. A specialty is made of handling and transporting grain, and they have elevators in the chief producing sections of the Dominion.

Mr. William Stewart of Montreal, the managing di-



WILLIAM STEWART, MONTREAL, ONT.

rector of the Kingston and Montreal Forwarding Company, whose portrait is given herewith, is a Canadian, and has been identified with the transportation service of the St. Lawrence since 1859. He is a recognized authority on all questions of transportation at the port of Montreal. He heads the agitation organized by the Board of Trade of that city against the Welland Canal toll of 10 cents a ton—say ½ cent a bushel—at present levied on all grain passing from Lake Erie to Lake Ontario. In the interest of our West as well as the interest of Canada we wish him and his company all success in their attempt to remove obstructions, natural and artificial, to the commerce which is destined to flow through this great natural outlet to the sea.

L. D. Berry, Minnesota state scale expert, has just completed his usual semi-annual inspection of scales in the mills and elevators at the head of the lakes. Mr. Berry thinks that the success of the system of weighing in vogue there is due to the hearty co-operation of both the buyers and sellers of wheat.

According to Robert McMillan, grain inspector at the New Orleans Board of Trade, there was 623,558 bushels of wheat exported from the port of New Orleans during April, against 640,205 for the same time last year. Wheat amounting to 269,056 bushels was exported from that port in April, against 1,323,230 for the same time last year.

THE LAW AS TO BILL OF LADING OVERCHARGES.

A bill of lading is primarily a written contract of one form or another, for the transportation of freight, entered into by and between a common carrier and a shipper. It is to be considered as governed accordingly by the familiar settled rules of law applicable to written contracts in general. But two or three points should in this connection be noted. The carrier now almost always being a corporation which must act through agents, who issue a bill of lading, in order to bind the carrier thereby, must have express or implied authority to make the contract contained therein. On the other hand, considerations of public policy have led the courts, time and again, to relieve shippers from many conditions contained in bills of lading, especially stipulations in effect exemptions from liability for the results of negligence on the part of the carrier and its servants. Furthermore, a bill of lading for an interstate shipment must square itself with the, as yet, more or less undefined and unsettled doctrine of a national interstate commerce law.

As a contract, a bill of lading confers as inviolable rights as any other. If the carrier fails to perform its part, it must respond in damages. The amount which it overcharges can be collected back. But care must be exercised to distinguish between real and merely apparent overcharges. Not all apparent overcharges are really overcharges, as will be further explained.

Overcharges are commonly occasioned by misrouting, by erroneous classification, by a change of weight or by mistakes made in computing rates, either at the time the bill of lading is issued, in billing the shipment out, or when the agent at destination makes his bill for the freight, which the railroads term an "expense bill."

Mutual mistakes, or the effects of fraud in contracts, will always be corrected for innocent parties, unless new rights of third persons have intervened. So if both carrier and shipper make a mutual mistake on some one point, either can have it corrected. The mistake of either the one or the other of them cannot be corrected to the other's prejudice. Fraud of the one can, on discovery, be corrected by the other.

It follows from the foregoing, that a carrier can make many corrections, increasing its charges, without creating an overcharge. Thus, if what a package contains is represented to it as one thing, and the carrier afterward

finds that it is in whole or in part something entirely different, it can make its charges on the latter, notwithstanding a bill of lading has been issued on the former basis.

The greatest trouble at the present time is over bills of lading covering interstate shipments. The railroads are much disposed toward the view that any such bill of lading at variance with their published tariffs is void and cannot be protected. This is, perhaps, less than half true. The Interstate Commerce Commission says that where a shipper does not enter into a contract for the purpose of securing a rate which he knows, or by the exercise of reasonable diligence might have known to be illegal, but is an innocent party to it, and makes his shipment in good faith on the strength of the rate therein named, the courts have jurisdiction, and seem inclined to hold that he is entitled to have the goods delivered on payment by him of the amount named in the bill of lading. And the Supreme Court of the United States holds, in a recent case, that there is nothing in the interstate commerce law which vitiates bills of lading, or which, by reason of the allowance of an illegal rebate, will invalidate a contract of affreightment, or exempt a railroad company from liability on its bills of lading.—*Clay Record*.

Like the proverbial acorn, every grain of wheat holds a great future.

BALING AND SHIPPING HAY.

BY K. M. TURNER.

Although there are more people engaged in the growing and marketing of hay in the United States than any other one crop that is grown, yet you will find few capable of giving any estimate on the magnitude of the hay crop. The late speech by Senator Mitchell in relation to the tariff on hay gives us surprising figures, and the speech, in its entirety, should be read carefully by all. In 1870 the hay acreage in the United States was 19,861,805, yielding 2,452,500 tons, the value of which on the farm was \$338,969,680, while in 1893, 23 years later, the acreage reached the enormous figures of 49,619,469 acres, the home value of which was \$570,882,872. This places hay far in advance of any of the crops produced in the United States.

The amount of this hay that is fed on the farm is, of course, considerable, yet it is safe to say that one-half of it is marketed in various shapes. It is unfortunately true that the farmer who raises from 10 to 100 tons of hay for the market has not as yet given that attention and care to hay that the crop justifies, and this accounts, to a great extent, for the low price that a large percentage of our hay is sold for in the various markets of the country.

Timothy hay, to bring the best price, must be attended to carefully and at the proper time. It should be cut when yet in the blossom, at the stage when 90 per centage of the hay raisers would term it still green. If properly cared for, hay cut at this stage will always retain a rich green color and an odor that can only be described as new mown hay. To obtain the best results and the best prices it should be immediately placed under shelter after cutting, and to avoid any waste or shrinkage should be baled promptly. If it is intended to go on the market at once it is not absolutely necessary to go through that process commonly known as "sweating," but may be loaded and shipped to nearby markets. This, however, can only be done when markets are within 12 hours' haul from the farm. Where it is necessary to ship longer distances, it is also necessary to give the hay time to go through the sweat before it is baled, otherwise it is sure to heat in the car, and on reaching the market be refused by the trade.

Various parts of the country differ in the style of bale considered the most serviceable. The extreme eastern, as well as extreme western, markets desire a large bale, the average size of which is 22x24x46 inches. The bales made on the old-fashioned Beater Presses are much larger and still find favor with some of the buyers in these markets. Large bales usually sell at an advance at from 50 cents to \$1.50 per ton over the small or quarter bales which are made on "perpetual" presses. The larger percentage of the hay crop is baled on this class of machines, of which there are numerous styles.

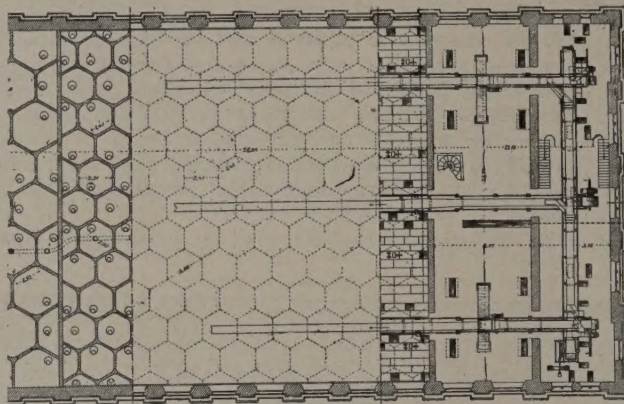
The Champion Steam Power Press is probably the best adapted to the use of elevator men, as it can be readily attached to the shaftings and operated without any additional expense as far as power is concerned, yet when desired it can be moved to the field and operated with an ordinary farm engine.

There is no class of men in a better position to handle the hay crop than the country elevator men. Too much attention cannot be given to the proper grading of hay at the shipping point. Probably 90 per cent. of the hay that is marketed is shipped by the grower, who has no facilities for grading, as he hauls direct from the field to the car. If the elevator men would take it from the farmers in the locality, grade it and load separate grades in separate cars, the product would arrive on the market in a much better condition and bring much better prices; too often has eight, ten or twenty bales of hay reduced the price of a car of otherwise choice hay from \$1 to \$2 per ton.

The average hay shipper of to-day has himself only to blame in probably 90 per cent. of the cases where he has difficulty with the buyer. Shippers do not

realize the fact that an occasional bale of No. 2 hay in a car will cost them more than the entire value of these bales, and rather than load them in a car of choice or good No. 1 hay they would be ahead financially by burning it in the field.

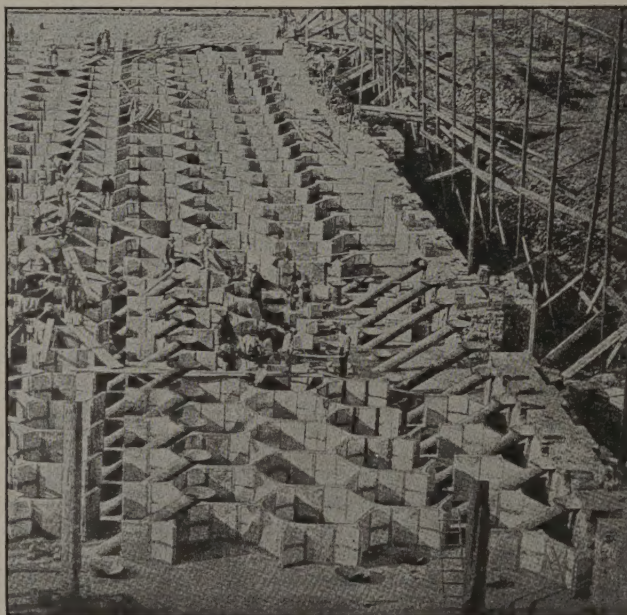
This, however, is not necessary, as there is always a demand for the lower grades of hay, if loaded separately and sold as such. I am pleased to know that this question is being agitated by capital that is interested in the sale of hay on the large markets, and I believe that the time is not far distant when hay will be handled as grain is now. Should that time come, we will find the shipper not so ready to accuse the receiver of robbing him, and we will also find that



SECTIONS OF DIFFERENT FLOORS IN ROUMANIAN ELEVATORS.

the receiver will be willing to admit that the hay shipper is a man of some integrity and honor.

One of the greatest evils in the handling of hay is the fact that the shipper and the receiver are not close enough in touch with one another. They do not have that confidence in each other that begets a satisfactory business, and it is unfortunately the case that the hay shipper is constantly changing his connections with commission houses on the same market. It is also to be as much regretted that what could be



FOUNDATION OF FIRE-PROOF ROUMANIAN ELEVATORS.

made one of the most pleasant, as well as profitable, occupations, that of handling hay on a large market, is given up in disgust by men who are capable of conducting the business if they would make an effort to get a little closer in touch with the shipper. Summing it all up, we have in hay a larger acreage and capital, and, if properly conducted, one of the most pleasant occupations that there is to-day open for energy and capital.

The question as to where maize or Indian corn originally grew is said to have been settled by Dr. J. W. Harshberger, who claims in a recently published monograph that after an exhaustive research he has decided that maize first grew in Central Mexico, and was probably first cultivated by the Mayas, from whom all native American agriculture has come.

FIRE-PROOF CONSTRUCTION IN GRAIN ELEVATORS.

BY E. LEE HEIDENREICH, M. E., PRESIDENT OF THE HEIDENREICH COMPANY.

During the congress of engineering societies at the World's Columbian Exposition in Chicago, it was my privilege to meet and become acquainted with Prof. Hermann O. Schlawe, chief engineer of the Roumanian Public Works Service. One of the objects of the professor's investigations in this country was the transportation and storage of grain, as well as the construction of our after-European-ideas-surprisingly-cheap grain elevators. In exchanging views on the comparative merits of American and European elevators, I elicited much interesting information as to the ideas of ideal elevator construction across the water, and some of it may be of interest to the readers of the AMERICAN ELEVATOR AND GRAIN TRADE.

During the last few years two large elevators have been built in Roumania, one at Braila and one at Galatz, both by the government, and under the supervision of Prof. Schlawe, and with machinery from Mr. Luther, the well-known Braunschweig manufacturer.

Referring to the accompanying sketch, it should be noted that, owing to the unfavorable conditions of the soil along the Danube River, the elevators were located fully 100 feet back from the river bank, and a quay of about 1,500 feet in length was built on piling, of concrete, faced with cut stone. Lengthwise of the dock is located a tunnel, 7'6" wide x 8' high, through which runs a rubber belt conveyor communicating at each end of the tunnel with conveyors connecting laterally with the receiving legs of the elevator. The elevator proper is 84'x160' long, and is built upon about 5,000 piles, driven vertically into the ground, and cut off about 21 feet below the grade line. On top of the piling is laid a solid layer of concrete 4½ feet thick, leaving the elevator first floor 16'6" under grade. At both ends of the elevator proper is located a tower containing stairs, elevators, scales, all transmissions, as well as the driving machinery for the distributing conveyor, belts on the bin floor.

The first floor of the elevator contains nine tunnels running parallel 9 feet high in clear, connecting transversely in three places by cross tunnels. On top of this construction are located the bins, 53 feet high in clear. The bins are hexagonal, as this form gives the greatest economy of bin material. The material for the bin walls are Monier plates, consisting of Portland cement and wire netting, in a manner which I shall attempt more fully to explain. The illustrations, while explaining themselves, will also give a general idea of the diversified use of this new system, which may, in the future, be of great importance in American elevator construction.

It is well known that cement has great strength and resistance against compression, but also that it is equally weak against tension. To better utilize the strength of the cement, Mr. Monier, a French gardener, some years ago, placed a series of iron rods or wires (Fig. 1) near the side of a cement

plate most subject to tension, connecting these wires or rods laterally by other smaller rods *b*, to keep them a proper distance apart, and found that he thereby greatly increased the carrying capacity of the plate. The system was patented in nearly all the countries of Europe, and attracted wide attention. The Ransome system, patented later in the United States, has much in common with the Monier system, but Ransome employs twisted square rods in the cement to prevent the rods from pulling out, probably for the same reason that our ancestors placed a gear on the locomotives and a rack between the rails for fear that the wheels might slip for lack of friction.

As a matter of fact, a chemical process takes place between the iron and the cement, whereby a silica combination is formed, which makes adhesion be-

tween the two materials fully as strong as any mechanical process ever could effect.

The Monier system is now being used very extensively in buildings for floor constructions (Figs. 2, 3, 4, 5 and 6) and in grain elevator bin constructions (see Fig. 17), which shows one of the bins in the elevators at Galatz and Braila. The bin corners consist of Monier blocks 19½" high with triangular wire loops placed about four inches from centers vertically. Two of these 19½" blocks are laid on top of each other in the six bin corners and 3-feet high Monier plates placed between them. As the tension side varies according to whether the bins are filled or empty, two wire nets are introduced in the plates, each being located one-sixth of the plate thickness from each side. At distances to correspond vertically with wire loops in the blocks, eye loops are laid in the plate and an iron rod set down in the joint interlocking the protruding eyes of the loops, the space between plates and blocks filled with cement, and the bin wall is finished 3'3" high.

When it is considered that all the plates and blocks may be prepared beforehand and piled up ready for use, it can be seen that this construction may be executed with considerable rapidity, and in some countries, like the Argentine Republic, where planking is imported from the United States, the cost of Monier plates would hardly exceed that of common planking. On top of these Monier bins the iron roof construction finds a solid support.

The bins are of two different dimensions, about one-half of the building having hexagonal bins of only 7½ feet internal diameter, while the balance have an internal diameter of 13½ feet. Between the elevator proper and one of the tower annexes has been located the cleaning machinery.

The vessels or barges located along the quay are unloaded by means of a traveling telescopic, marine leg, discharging the grain into spouts communicating with the longitudinal running conveyor located in the dock tunnel, and can be spouted onto either the top or bottom belt, according to which part of the elevator is to be loaded, as either connects with the cross conveyors at both ends of the elevators. These conveyors are also used for unloading the elevators into vessels.

I suggested to Prof. Schlawe that, inasmuch as cement was a comparatively good conductor of heat, the same trouble might be experienced from condensation of moisture as we have had with iron and brick bins, but he informed me that so far they have had no trouble whatever on that score.

As to the comparative cost of an 8" planking wall and a 4" Monier plate of equal strength, I think that by employing adequate machinery the Monier plates could be furnished and erected at about 20 per cent. more than the planking, *i. e.* for a very large elevator.

I have briefly described the docks at Galatz and Braila. To anyone acquainted with American dock construction who visited the German engineering exhibits in the gallery of the Transportation Building last summer, it must have been apparent that European dock and harbor constructions are immeasurably ahead of our own. Compare the bulging docks along the branches of the Chicago River and harbor

with those of Bremen, Antwerp or Dunquerque. Lately substantial construction of business blocks has been made obligatory by their enormous heights and the demands of the insurance companies, as well as a view to a permanent investment. When will the time come when elevators and docks shall be built with a view to permanency and independent of risks from fire or water? The lack of conservatism, which so long has characterized Americans, has had a great influence upon our engineering undertakings, but with the success of enterprise and the establishment and realization of what commenced as projects and chimeras, a conservative spirit is creeping into our building system, which sooner or later is bound to make itself known in our grain elevator and dock constructions.

RICE IMPORTS AND EXPORTS.

According to the last report of the Bureau of Statistics rice aggregating 383,000 pounds, valued at \$15,138, was imported free of duty under reciprocity treaty with the Hawaiian Islands during March, against 455,300 pounds, valued at \$17,804, in March

\$914,707, imported during the corresponding months preceding.

Of imported rice flour, rice meal and broken rice, none was exported in March or in March, 1893. There was none exported during the nine months ending with March, against 81,230 pounds, valued at \$1,700, exported during the nine months ending with March, 1893.

THE ELEVATOR INTEREST IN THE NORTHWEST.

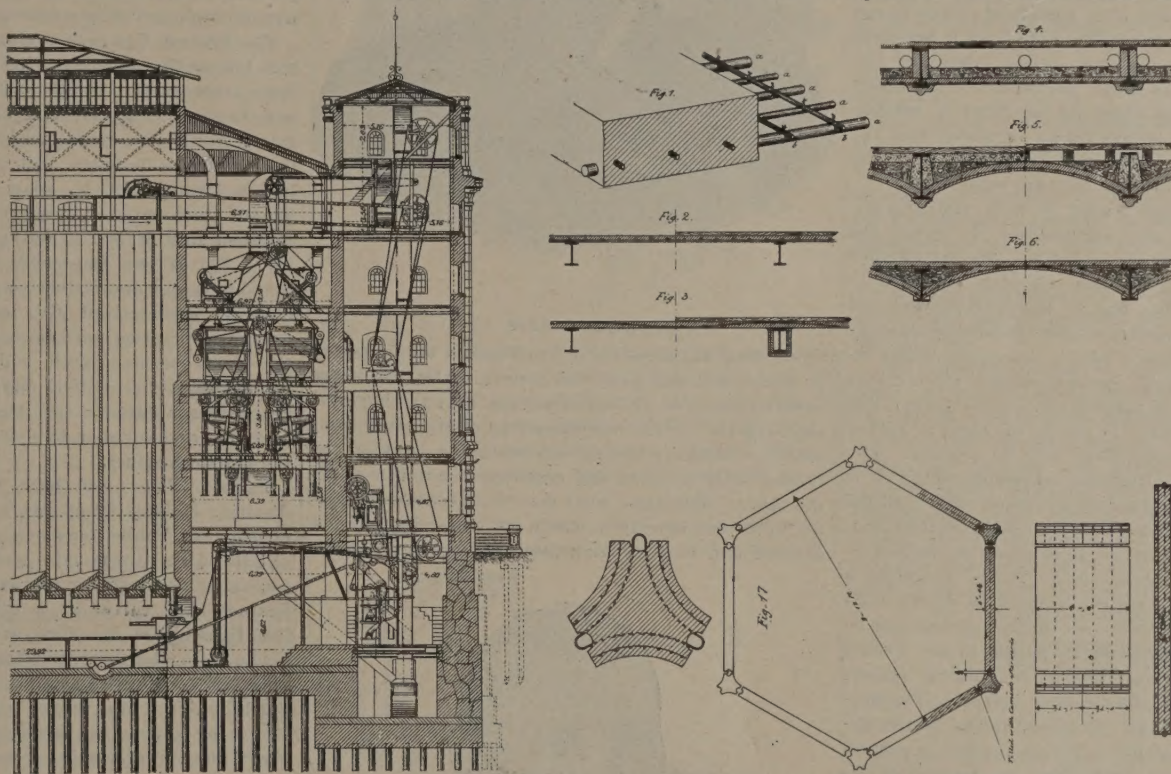
The immense growth of the so-called "elevator interest," especially in the Northwest, its enormous increase in grasp and power, both over the farmer and the miller, the rapid development of aggressiveness, not to say arrogance, on the part of its moving spirits, may well give the miller pause for thought. We say so-called elevator interest because in its forward strides it has long since passed the significance of its title. It is now the great wheat owning and controlling interest in the grain-raising Northwest, and the name elevator no longer has meaning, except as applied to the moderate-sized annex of the flour mill.

It has grown to be the all-powerful and gigantic middle man of the trade. It stands between the farmer and the miller, and by virtue of its strategic position and its immense financial backing, secured by the farmers' own collateral, it lays its heavy hand both upon the raiser of the wheat and the grinder thereof, and exacts, for the mere garnering of the grain, a toll so heavy that when the product of the wheat field is sold in the world's markets as flour, the profit, both of the raising and the grinding, lodges in its hands.

An elevator owner is supposed to be simply a warehouseman, and the

elevator is, legitimately, a warehouse for grain. As such it has, properly, a certain function to perform. Its object is to receive the grain, store it and deliver it to the miller. This is its sole legitimate service to the world, and for this service it is entitled only to its charges for storage, the same as any other warehouse for any other commodity. Such is the modest field which the elevator is rightly entitled to occupy, and its owners should be recompensed for the service they render in accordance with its value to the farmer and the miller. If the uninitiated imagine that the gigantic elevator interest of the Northwest has been content to occupy this field, and has only received its proper storage charges for so doing, they are densely ignorant of the abnormal proportions to which this middleman has grown, and the tremendous power which he wields, not for the good of the world, but for his own personal aggrandizement.

Strangely enough the miller has hitherto seemed to ignore the growth and development of this mighty power, which, fungus-like, has sprouted and grown to gigantic maturity in a comparatively few years. Had he been a close student of the conditions surrounding his own trade, as shown by its history, he would have been forewarned. He would have known that, side by side, the milling industry and the elevator interest have never been known to thrive equally well. He would have observed that wherever the terminal elevator reached its maximum, there the milling business stood still or fell into decay; that in cities which



PART OF LONGITUDINAL SECTION OF BRAILA ELEVATOR.—FLOOR AND BIN CONSTRUCTION.

preceding; and during the nine months ending with March 5, 924,083 pounds, valued at \$235,875, were imported, against 7,784,800 pounds, valued at \$323,324, imported during the corresponding months preceding.

Of rice imported free of duty we exported 100 pounds during March, against 40 pounds in March preceding; and during the nine months ending with March 8,830 pounds were exported, against 56,059 pounds exported during the corresponding months ending with March, 1893.

Dutiable rice amounting to 8,625,009 pounds, valued at \$131,325, was imported in March, against 9,993,590 pounds, valued at \$172,648, in March, 1893; and during the nine months ending with March 42,449,154 pounds, valued at \$663,097, were imported, against 57,672,799 pounds, valued at \$1,008,279, imported during the nine months ending with March, 1893. Of dutiable rice we exported 1,091,491 pounds, valued at \$18,590, during March, against 664,129 pounds, valued at \$12,975, in March, 1893; and during the nine months ending with March 8,810,818 pounds, valued at \$157,074, were exported, against 7,263,719 pounds, valued at \$147,969, exported during the nine months ending with March, 1893.

Rice flour, rice meal and broken rice aggregating 3,560,258 pounds, valued at \$52,552, was imported in March, against 5,673,736 pounds, valued at \$101,607, in March, 1893; and during the nine months ending with March 39,435,863 pounds, valued at \$602,247, were imported, against 49,480,359 pounds, valued at

otherwise would have been excellent milling points the presence of heavy elevator interests blighted the growth and expansion of the milling business. But these significant facts were overlooked.

The real growth of the milling business in the Northwest has been very rapid, and only dates back comparatively a few years. During this period the miller has not had time for profound study along side lines. The remarkable changes in his own business and its rapid development occupied his entire time and thought. He has been disposed to regard the elevator as a friendly co-operating influence in the working out of the grain business. Until now he has looked upon it as, in some degree, an auxiliary industry to his own. The sun of progress has shone warm and hot, and the field has ripened rapidly. In the up-growth some strange plants have been developed, and before they could be checked have assumed proportions which now threaten to utterly destroy their neighbors. The present system of operating elevators is one of these. It is the Russian thistle of the Northwestern trade, and at this late date the miller is beginning to realize the fact and to debate in his mind some plan whereby his own continued existence can be insured. As long as profits were large it mattered little whether the elevator owner controlled the wheat or not; but as these declined, and the miller has found time to look about for the cause of his continued discomfiture, he has begun to realize that the middleman—the genius he himself had let out of the bottle—is crowding him for the very right to live.

The elevator has long ceased to be a simple warehouse. Persistently and aggressively its owner has extended his hold on the situation. He has fortified himself until now he demands not only the right to exist and do business, but to have his profits—and they are far from moderate ones—absolutely guaranteed to him, and to levy a heavy toll on the miller beside. When the wheat comes to market the elevator owners summarily says, "Hands off!" to the miller. The latter must not interfere in his divine right to gather in the crop. If he does, there will be trouble. The miller tremblingly withdraws, notwithstanding he is to grind the wheat and might be considered a rightful buyer of it. By means which are fairly well known, the elevator interest gathers in the crop of the Northwest. The warehouseman is no longer operating a warehouse; he is buying the wheat with which to fill it. In order that he may be insured against loss he demands that no laws shall be passed in the United States which shall interfere with his selling against these purchases in a speculative market. The purchases are made, not for grinding, but to fill the elevators, and in order that carrying charges (a portion only of the elevator's profit) may be assured, he demands the right to sell wind against the grain. In passing it would be well to ask whether the dry goods dealer, the grocer or any other business man demands insurance against loss on the goods he purchases, and if he should not, equally with the elevator man, be entitled to it. Having purchased the wheat with money obtained on the wheat itself; having protected himself by means of the speculator, the elevator owner gathers in the crop with a wide, quick grasp, and seats himself, like the Bishop of Bingen, amid his store of grain, protected by law and perfectly secure, to await the turn of events, confident that he cannot suffer, whatever may come to the miller or the farmer.

Sometimes, not content with even this position, his cupidity leads him toward speculation. This, however, in the ethics of the elevator trade, is not regarded as legitimate, and the giants in the trade do not practice it. They find it better to play a sure game. Occasionally the speculation floors them, and then there is a showing that is a revelation as to what an elevator company can do in the line of financial jugglery when it is forced, as witness the case of the Northern Pacific Elevator Co., which came to grief last summer. As a rule, however, the elevator owner does not try speculation unless he is very much bored while waiting for the spring and summer months to arrive and the miller to ripen, and finds time hanging heavily on his hands. "This business is an almighty good one," said an elevator owner in confidence, "unless we try to get the last quarter of a cent, and then we sometimes lose it all." Gradually as the year rolls round and the outside sources of supply approach ex-

haustion, the elevator owner begins to come into his inheritance. He is the master of the situation, and he doles out the wheat to suit his own ideas. At the worst he is certain of his carrying charges. At the best, his profits may be enormous. When the miller desires to buy for his needs, he is ready to treat with him on a basis of a handsome premium over the May or the July option.

Such is the "legitimate" system of handling the wheat crop which has grown up in the Northwest, and which clamors loudly for protection, supported



FAUSTIN PRINZ.

by its bankers, whenever an anti-option bill is spoken of which will take away the sure thing feature of the business and give it no advantage over the buyer of anything else, or the warehouseman of any other commodity. Such is the system which is choking the farmer with one hand and crushing the miller with the other. Meantime what does the elevator contribute to the community in which its owner has planted himself and thriven luxuriantly? About as much



HENRY C. RAU.

nutriment as would accrue to a chicken by feeding it with shot. The elevator itself is a comparatively cheap structure. About it are employed a few hands. There is a small army of clerks and agents, and that ends its contributory influence toward the place in which it is located. The mill, on the contrary, is a decided help to every interest of the place, and yet, when the mill is threatened its friends are few, but the elevator owner flies to the press, which, in a vague way regards him as one of the great interests of the land, and has no difficulty in creating popular feeling in his behalf.

The time has come when the miller begins to realize the necessity of divorcing himself from the elevator

interest. The economy of the present day has no room for such an expensive luxury as a middleman who, for such a slight service, exacts such enormous reward. The system of handling our crop which allows the elevator owner to buy the wheat which fills his warehouse, guarantees him his carrying charges and affords him a strategic position by means of which he practically controls the situation is radically wrong, and should be changed, and the miller himself should be the man to take the initiative.—*Northwestern Miller.*

MAKERS OF THE PRINZ GRAIN CLEANERS.

The Prinz grain cleaning machinery is known to all readers of this journal and favorably known to all users. The Prinz & Rau Manufacturing Company, which was organized at Milwaukee Nov. 1, 1888, has been remarkably successful with all of its machines. The company started with about a dozen men, and has worked up its business gradually, making improvements right along and increasing its trade, until now it employs 35 men continually.

The Prinz & Rau grain cleaning machinery is so well known that it sells on its merits. The company has a large trade in the Prinz Improved Barley Grader and Cockle Separator, and the Prinz Grain Separator, which is made without the cockle cylinders. This machine will extract from barley broken kernels, cockle, peas and all foreign seeds. These machines are used extensively in Russia, England and New Zealand as well as in this country. The Prinz Improved Upright Smutter and Polisher is also used extensively in the flour mills and cleaning elevators of this country. Builders and furnishers erecting mills in parts of the country where the wheat contains cockle equip them with Prinz's Patent Improved Cockle Machines. The company also enjoys a large direct trade. The company employs no traveling men to sell or advocate the use of the Prinz machines.

Faustin Prinz was born Feb. 10, 1851, in Tyrol, Austria. Mathias Prinz, his father, had been a miller at his place, Schlis, for many years, and from earliest childhood Faustin was in and about the mill, there acquiring that taste for mechanics that led him to a distinguished career as a mechanical inventor. In 1860 Faustin's mother died, and he went to live with his aunt in Ronsberg, Germany, where he continued to attend the public schools during the winter months until his thirteenth year. In 1864, having decided to follow the trade of his ancestors, he left school and began an apprenticeship of two years at a machine and millwright shop at Obergunzburg.

For a number of years after completing his apprenticeship he worked at different shops identified with building mills and special machines for same in different towns throughout Germany and Switzerland, advancing, in the space of a few years, from an ordinary millwright to the position of foreman of a large mill building house in Rarshach, Switzerland. Here he obtained his first knowledge of improved milling machinery, superintending the construction of a number of large roller mills.

In 1873 Mr. Prinz began business for himself in Zurich, Switzerland, opening a shop for the manufacture of grain cleaning milling machinery, devoting himself particularly to the manufacture of a purifier for middlings and a wheat cleaner, both of his own invention. He remained in Zurich until 1878, doing a successful business in perfecting his numerous inventions. In 1878 he went to Paris to attend the exposition. While there his attention was called to the account of the explosion of the Washburn Mill at Minneapolis, and this caused him to make investigations that revealed to him the immense possibilities in his business offered by the new world. With him, to think was to act. Having concluded to try his fortune in the great West, Mr. Prinz immediately closed out his business in Zurich and sailed for America, landing at New York Sept. 19, 1878. He started West at once, and for a year made his home in Minneapolis.

In 1883 Mr. Prinz removed to Milwaukee, and for some time devoted himself entirely to the perfection of a number of his inventions. At that time the Mil-

waukee Dust Collector Company was organized solely for the manufacture of the Prinz Dust Collector. In 1886 Mr. Prinz began business for himself, engaging in the manufacture of all kinds of grain cleaning and milling machinery, but particularly devoting himself to the production of such machines as had been invented and patented by himself. In 1888 Mr. Prinz attended the millers' convention at Buffalo, N. Y., and there met Mr. Henry C. Rau, with whom he organized the Prinz & Rau Manufacturing Company, the name under which the firm has since conducted business.

Among the most valuable of Mr. Prinz's inventions might be mentioned: Prinz's Improved Barley Grader and Cockle Separator, a combination machine for removing cockle and broken kernels from barley; Prinz's Improved Cockle Separator, for removing cockle from wheat; Prinz's Iron Prince Smutter, for scouring wheat, removing by friction all dirt and fuzz. Besides these, Mr. Prinz has invented and patented many improvements for machines used in cleaning grain.

Henry C. Rau was born June 22, 1854, in Wisconsin. His father died ten days before he was born, and his mother married again after Mr. Rau was about a year old. He was brought up on a small farm near the city of Milwaukee. At the age of ten his parents moved to the city of Milwaukee. He attended a parochial school for about two years in the city, and eight months in a public school. He went to work before he was thirteen years of age. He worked at wood carving for about two years, when he got a position in the car shops of the C., M. & St. P. Ry. Co., where he learned car building. During leisure time in the evening he took mechanical drawing lessons. While in the employ of the company he executed a full line of working drawings of cars the company was building. In the year 1873 the company gave up building passenger cars, when he left the company and followed millwright work in various parts of the country.

He commenced work for the Edw. P. Allis Company in the summer of 1876 in the drafting room of the mill building department. He remained about two years, when, in the fall of 1878, he went to Minneapolis, where he helped plan and build some of the large mills, also overhauled a number of mills to the roller system. In 1881 he went to work for Chisholm Bros. Here he took charge of the mill building department. At different times he was identified with other large mill building establishments such as the Bradford Mill Company and the Great Western Manufacturing Company, in whose employ he was before he went to attend the millers' convention at Buffalo, N. Y., in 1888, where he met Mr. Prinz, with whom he organized the Prinz & Rau Manufacturing Company.

RAINMAKING A FAILURE.

Secretary Morton has received a large number of inquiries from all parts of the country as to the result of the department's rainfall experiments and the feasibility of controlling precipitation by means of explosions. The following circular is being sent by the department to all inquiries:

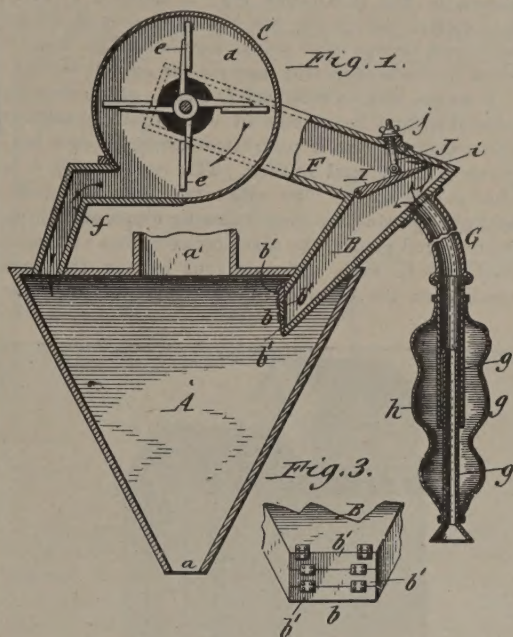
"Replying to your letter as to rainmaking experiments, I have to inform you that in no case did they pass the merely experimental stage, and that the prospect of ultimate success is not such as to justify farmers or other citizens in rainmaking experimentation. In this determination, judgment and opinion, I am supported by the scientists and other alleged experts in meteorology connected with the United States weather bureau. The bombardment of the skies for water, as carried on by this department, did not produce results calculated to inspire the hope that any method of concussion can be made commercially successful in precipitating the moisture from the clouds."

In New York City the rate for shoveling grain to the leg of the elevator in canal boats is \$1.50 per 1,000 bushels; at Buffalo the rate for shoveling in vessels is \$4 per 1,000 bushels. In New York canal boats are trimmed with 10,000 to 13,000 bushels of grain for \$4; at Buffalo the rate is \$10 for 8,000 bushels. The rates in either case are two and one-half times as much in Buffalo as in New York. It is rumored that the pool at Buffalo is backing up the high rates demanded by the grain shovelers.

A PNEUMATIC ELEVATOR.

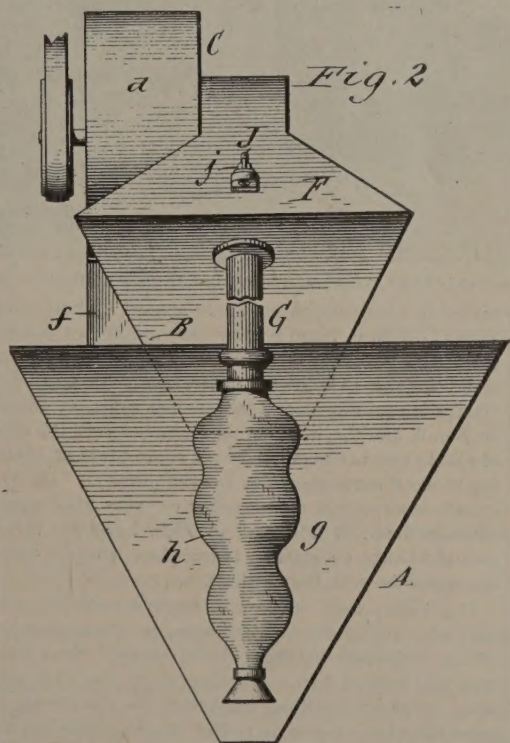
James H. Finley of Buffalo, N. Y., has invented an improvement in pneumatic elevators, which has for its object to produce an elevator of this character, which is simple in construction and which will elevate grain and similar material in bulk, in an expeditious manner.

In the accompanying drawings, Fig. 1 is a longitudinal sectional elevation of the improved grain eleva-



tor. Fig. 2 is an end elevation thereof. Fig. 3 is a fragmentary elevation of the main grain spout and its outlet valve. Like letters of reference refer to like parts in the several figures. The elevated receiver or hopper is provided in its bottom with an outlet opening *a*, from which the grain is conducted to a grain scale or storage bin, and in its top with an air outlet opening *a'*.

The main delivery spout *B* is arranged in an inclined position and extending with its lower or dis-



charge end into the receiver *A*. The lower end of this spout is provided with an automatic or gravity valve *b* for preventing the admission of air into the spout through its discharge opening. This valve is hung at its upper end to the upper edge of the discharge opening of the spout in the usual manner, and consists of several horizontal sections *b'*, which are hinged together one above the other, as shown in Figs. 1 and 3. When a small quantity of grain is in the spout its weight opens only the lowest section of the valve, to permit the grain or other material to

escape. The remaining sections are successively opened as the amount of grain in the spout increases.

The eye of the fan case is connected with the upper end of the main grain spout by a suction pipe or passage *F* and the blast or discharge passage *f* of the fan opens into the top of the receiver.

A flexible elevator tube opens at its upper end into the main grain spout and is provided at its lower end with a suction head *g*, which is placed into the body of grain in the hold of a vessel or other place from which it is to be elevated. This suction head consists of several telescopic sections *g'*, the joints of which are made air tight by a flexible covering *h* inclosing said joint.

A deflector *I* is arranged transversely in the main grain spout opposite the outlet of the elevator tube and whereby the grain entering the grain spout is intercepted and separated from the air current. This deflector is pivoted with one end at one side of the grain spout and its free end is separated from the opposite side of the grain spout by a passage. The width of this passage can be varied for regulating the force of the suction of the fan or other exhaust device by an adjusting screw pivoted at its inner end to the deflector and passing with its other end through the suction pipe, and a thumb nut applied to the screw and bearing against the outer side of the suction pipe.

The suction of the fan raises the grain through the elevator tube into the grain spout *B*, where the deflector causes an abrupt turn in the air current whereby the greater portion of the grain is separated from the air, the latter passing to the fan and the grain dropping by gravity into the grain spout. When a sufficient amount of grain has accumulated in the grain spout to overcome the weight of the valve, the latter opens and permits the grain to discharge into the receiver.

Any grain which may be carried past the deflector by the air current is drawn with the latter through the fan case and its blast passage and delivered into the top of the receiving hopper, where the grain separates from the air and passes through the lower opening of the receiver, while the air passes out through the upper opening thereof. The blast passage of the fan thus serves as an auxiliary grain spout through which any grain not received by the main spout is carried into the receiver.

SCREENINGS.

The barrel is the unit of measure for corn down in Mizzoua—sometimes in the liquid form.

Ticker—What are you, Tapely, a bull or a bear? Tapely—Neither, old man, just a great big, elegant, blooming ass.

Stockholders of the Interstate Grain Palace Association met in Aberdeen, S. D., recently and decided to hold another exposition this fall.

An Eastern man proposes to diminish and render safer the trading for future delivery by compelling each side of the deal to put up 5 per cent. of the value.

Barley is king! For the first time in nearly ten years its price rose above that of wheat in the local market of San Francisco last month. On account of the extreme dry weather the price rose to \$1.23½.

A Peterboro (Ontario) grain dealer in looking over his correspondence the other day found telegraphic orders for 1,300 bushels of wheat for which \$2.50 per bushel was paid. That was in 1865, just at the close of the civil war in the United States.

Everything has its compensations, and there is nothing so bad for the farmer but that it might be worse. Wheat is too cheap, but by a judicious grinding and feeding to hogs and cattle, some farmers claim that more than \$1 per bushel can be realized.

The first installment of Canadian vessels are here for cargoes of corn, and will take about 350,000 bushels. Receipts have increased here of late, and the tendency of trade is to Montreal for export. When Buffalo learns that a cheap cereal like corn cannot stand their tollgate swindling, they may expect a portion of this trade, unless meantime commercial relations have fastened it in other channels.—*Toledo Market Report.*

MACDONALD'S HONEYCOMB CONSTRUCTION FOR STORAGE HOUSES.

The fundamental principle of the construction of grain elevators in this country has changed but little,



FIG. 1.

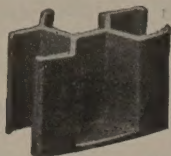


FIG. 2.



FIG. 3.

if any, in the past thirty years, but the conditions under which they are built, and the requirements of the grain trade have undergone considerable change. These in turn have set our elevator constructors thinking. It is more than probable that the first years of the twentieth century will see a radical change in the methods and materials used in this important branch of our industry. The product of the pine and hemlock tree is still the material largest used, and will hold its place until the question of cost and expediency drives it from the market. The granaries of the coming century will be built fire-proof, there is little reason to doubt; but the only available materials for this purpose at present can have no place till the grain merchant is willing to pay more for the first cost of his storage room—he is already willing to pay less for his insurance.

Since we must confine ourselves to the use of combustible material, the next best thing is to dispose of it in the building so as to get the greatest amount of utility from the least amount of material, and so systematize the construction that the labor on the product will be reduced to a minimum.

To this end the Macdonald Honeycomb Construction, as manufactured by the Metcalf-Macdonald Company of Chicago, is devoted. The evolution of the idea may be traced to the statement, that, if a plank of wood is bent to form a true cylinder having the two ends firmly united, the material of the plank is in the best possible shape to resist internal pressure, because the fiber of the wood is submitted to a tensile strain. If other planks be bent exactly the same and piled one on the other, edge to edge, firmly united, we have a cylinder of wood which may be made to hold more grain, or other material, for each foot, board measure in the wall, than can be done with the same material placed in any other form.

But we find in actual practice that the cylindrical form is objectionable, for the reason that when clus-

tered in quantities they cannot be "nested" without loss of space. We are obliged to abandon this ideal form and find the next best that will "nest" is the hexagon. The busy bee discovered this principle in storage construction several years ago and still adheres to it. He is therefore entitled to some credit, hence "Honeycomb Construction."

are thus enabled to sell a complete knock-down elevator f. o. b. cars at their works, or contract to put it together on its site themselves. The capacities may range from the smallest to the greatest; the bins are nested in any number required, and their height is only limited by ability of the walls to sustain the load.



6,000 BUSHEL ELEVATOR—MACDONALD'S HONEYCOMB CONSTRUCTION.

placed in construction so as to clamp all horizontal joints. Figs. 6, 7 and 8 show the method of joining the planks to form the bin walls, one joint only being made for the purpose of illustration. The interior clamps are spaced from 2 to 3 inches apart, as shown on Fig. 6, and the intervening space between the ends of planks and castings filled by a short piece of molding in wood made specially for the purpose. On the outside the castings are placed with very little space between them, as indicated on Figs. 7 and 8. Whatever shrinkage or settling takes place simply closes the space between the castings.

The timber work of the first story may be the ordinary post and girder construction, an arrangement of which is shown in the general plans. This story may be framed for a working floor, for the clipping, weighing, shelling machines, etc., as shown, or provided with a conveyor; when the machines are not required, may be made low and the cost lessened.

The possibilities of this method of construction are manifest to the elevator man at a glance. The art of elevator building is reduced to a system, uniform and exact. Every pound of the material above the cap stone of the foundation is prepared and finished by the manufacturers before shipment from their yards. Even the cap stones are included in the shipment. Any intelligent carpenter can put it together without further aid than the plan which is furnished with each contract. The manufacturers

are thus enabled to sell a complete knock-down elevator f. o. b. cars at their works, or contract to put it together on its site themselves. The capacities may range from the smallest to the greatest; the bins are nested in any number required, and their height is only limited by ability of the walls to sustain the load.

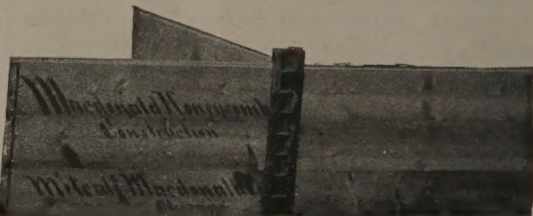


FIG. 8.

For small houses, where it is not desirable to cover with iron, the outside walls may be left just as they are and painted. Should it be desired at any time to take the house down for removal, the only material that may be damaged would be the sheathing and shingles. The bins come apart easily by removing the clamp castings, and as there are no nails used in putting them together every piece may be preserved without damage. The bottom for each bin is made self-cleaning, manufactured to a standard pattern, and goes with the outfit ready to drop into its place with valve, spout and all fittings complete. The elevator legs are also prepared at the factory with all machinery fitted, buckets attached to belt, and wood work all ready to screw together.

The development and perfection of the oil or gas engine has made it possible for the manufacturers to offer a very complete outfit, including this wonderfully cheap power. The "Lewis" Gasoline Engine has been adopted by the Metcalf-Macdonald Company as the standard motor for this trade. Simple to operate, inexpensive to maintain, and furnishing power for 1½ cents per hour per horse power, it drinks only oil, at 10 cents per gallon.

Heretofore the cheapest storage which elevator builders have been able to produce has been the "big packing box," that is, four walls, or a building with immense bins held together by long rods of iron, with the outside bolstered and braced, with the floors all flat so that many tons of the grain would remain on them,

after as much of the grain as could run had trickled through the valve, the remainder being shoveled out by hand. In price, Macdonald's honeycomb construction is in the field against the "packing box." In utility and desirability there is no argument left

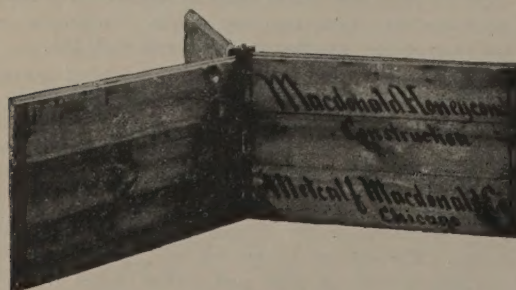


FIG. 6.

tered in quantities they cannot be "nested" without loss of space. We are obliged to abandon this ideal form and find the next best that will "nest" is the hexagon. The busy bee discovered this principle in storage construction several years ago and still adheres to it. He is therefore entitled to some credit, hence "Honeycomb Construction."

In the absence of wax, the patentee of this arrangement had recourse to iron for joining the corners of

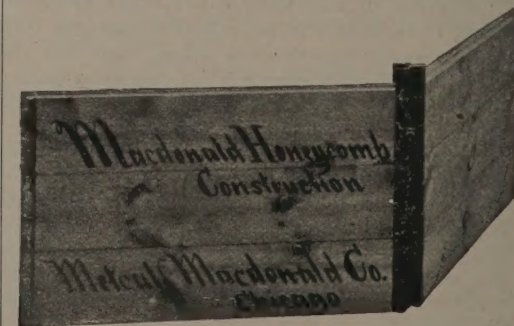


FIG. 7.

for our old friend who has served his purpose and in the process of evolution has been left behind.

The engravings show a 6,000-bushel honeycomb, with receiving elevator leg and separate leg for cleaner; one receiving hopper scale, 60 bushels' capacity, and one shipping scale of 60 bushels. Cars are loaded through flexible spout direct from scale, driven by "Lewis" Gasoline Engine, using manilla rope transmission to elevator heads. The bins are filled

and emptied by gravity through spouts. The outside is painted and the roof covered with tin.

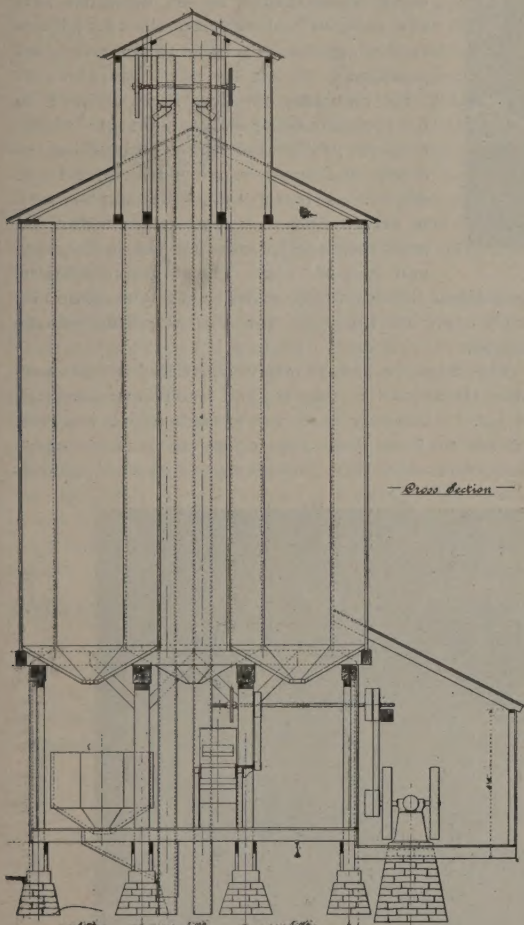
It will be noticed that even the weigh hoppers have not escaped the clamp casting, and are made octagon on the "knock-down" principle. The fact that elevators for shipment have become a standard article of manufacture enables the makers to prepare the material and keep it in stock. The timber is all well seasoned and carefully selected and with their admirable system of manufacture are able to deliver their product at the lowest possible rate.

FEED GRINDING.

BY F. RIDDELL.

A man engaged in the milling business once said to me: "I am going to quit milling. Flour making does not pay any more, and while I could make a living, and a little more if I did a gristing and feed business, I won't stay at it. The feed business does not require skill enough for me to engage in it."

Now, while in certain respects the grinding of feed



MACDONALD'S HONEYCOMB CONSTRUCTION—CROSS SECTION OF 6,000-BUSHEL ELEVATOR.

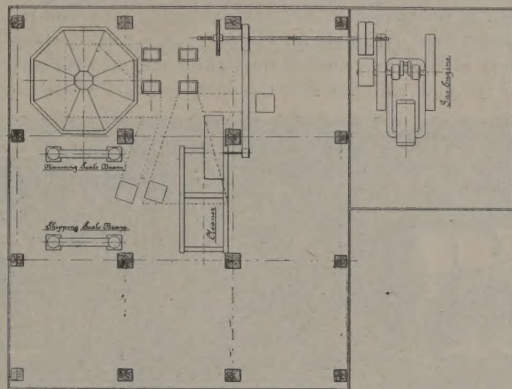
does not require the close attention that is necessary in flour milling, the animal creation being, apparently, entirely indifferent as to the question of color; at least I never heard of any of them kicking because a batch of feed was a little "off" in that respect. When the matter is considered in other aspects it will be seen that not only the business ability of the grain buyer or miller who undertakes to furnish mixed feed at a rate which will be at once profitable to seller and buyer will be taxed in the effort. If he honestly endeavors to supply feed that will be acceptable to all of his customers he will require the ability—given the purpose for which the feed is required—to furnish the best combination for that purpose which the price required will permit.

This leads me to observe that the necessity for the grinding of feed rests on two physiological facts; the first that for most animals grain is thus rendered easier of digestion, the other that no grain is in itself, for general purposes, an ideal food, but requires in most cases the mixing in of other grains or part of other grains in order that elements lacking in its own composition may be supplied by adding those contained in others.

Thus, while maize, perhaps, comes nearer answer-

ing to the perfect animal food than any other, the man who attempts to raise a lot of young pigs on corn alone, or as their principal food, is likely soon to find himself in possession of a scurvy lot of shoats. If he had sold part of the corn and bought shorts or rye feed, he would probably have had the satisfaction of hearing his infantile porkers grunt their thanks as they lay about their pen with shining coats.

I remember one winter when corn was relatively much cheaper than oats or bran how some of my dairying customers concluded to drop the oats out of their grists, depending on feeding a little extra bran

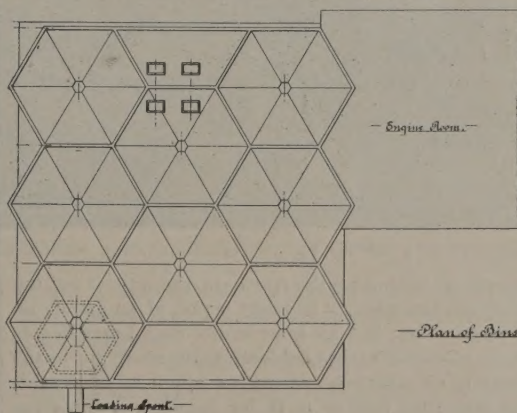


MACDONALD'S HONEYCOMB CONSTRUCTION—PLAN OF FIRST FLOOR OF 6,000-BUSHEL ELEVATOR.

to make good the loss to their cows. One trial proved sufficient, however, to show them that "Old Boss" was not to be cheated so easily; for as soon as they had made the change the telltale scales at the cheese factory revealed the shrinkage caused by it. If they had been making butter at home they would probably have tried to console themselves by thinking that they were getting as much butter as ever, when the scales morning by morning showed their yield dropping off. They were glad enough to return to the oat mixture, even though it was a little more expensive.

On the other hand, many dairymen err in feeding too exclusively for milk, neglectful of the fact that their cows should be so fed as to gain flesh while yielding their full supply of milk, and to do so must have a generous allowance of flesh-producing as distinguished from milk-producing food.

The most successful dairyman, in a financial way, of my acquaintance is one who keeps about twenty cows, all in such condition that when dry they can in a few weeks be turned off for beef. If for any cause they are not desirable dairy stock no sentimental con-



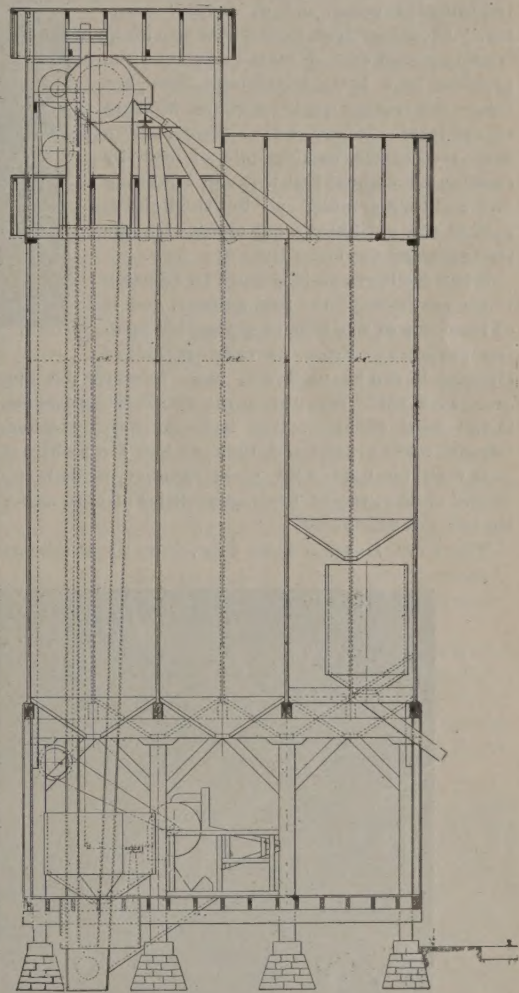
MACDONALD'S HONEYCOMB CONSTRUCTION—PLAN OF BINS OF 6,000-BUSHEL ELEVATOR.

siderations keep them from going "the way of all flesh." And from their condition they generally fetch such prices as will at once allow their places to be filled with something more desirable. It is perhaps needless to say that the rations fed to these cows contain a larger portion of corn than is commonly fed at dairies. The success of this farmer abundantly justifies his course.

Singularly enough the greatest obstacle in the way of a study of feed grinding in a scientific way is the cheapness of the Indian corn nearly always plentiful in most parts of the country. The farmer who has huge cribs of corn for which he can hope to receive but a small price at the nearest railway station, per-

haps several miles away, is not likely to listen with rapt attention when expostulated with about the wasteful way in which he feeds it, even when he is assured that a mixed feed would be much more profitable in the long run. Having the corn he generally contents himself with using it to feed all his stock without stopping to inquire whether that course is most profitable.

It is well known to most of these men that stock intended to be fattened for the market and that which it is desired to keep merely growing requires a very different ration. The former, having attained its growth, now requires but a fat or flesh forming food, while the latter requires one much less stimulating yet capable of supplying the elements needed to increase the growth of bone and muscle. For the former a judicious mixture of corn with oats ground up together would form a very good food, the proportions depending somewhat upon their relative cost,



MACDONALD'S HONEYCOMB CONSTRUCTION—LONGITUDINAL SECTION OF 6,000-BUSHEL ELEVATOR.

while a very small portion of corn should be put in the feed of the young and growing animals.

While corn, in all probability, will remain the principal stock food of this country, the necessity for economizing which yearly grows more insistent as the country fills up and the competition of other countries for the markets of the world, compels a closer study of cheapness in production, and the saving of many of the elements of plenty which are now to a great extent virtually wasted.

It is singular that with the possibility of keeping corn in perfect condition for several years so many farmers will feed it out recklessly or carelessly at the same time that they will scatter in their fields bushels of seed, which, if ground up, would make the best kind of feed for cows or young stock, while by their present plan they simply reseed their cultivated land with weeds every time they haul out a load of manure. So, too, many country elevators will litter their driveways and perhaps the adjoining railway track with seeds got from cleaning grain of various kinds which if ground up with a small portion of grain, might have been made into good and palatable food for stock.

The most common seed cleaned out of grain and

other seeds is the one variously known as "barn grass," "pigeon weed," "foxtail," etc., which is common on all land cultivated for any length of time, and is always a sure crop if the grain cultivated fails to cover the ground pretty completely, being almost certain to occupy the waste places left for any cause among crops of oats, flax, etc.

This seed makes an excellent feed for dairy cows, especially when cleaned out of flaxseed, the small immature grains of which also find their way into the pile of weed seed without injuring it in the least. In dry seasons the foxtail especially flourishes and then frequently helps out materially the otherwise diminished supply of grain for the cows.

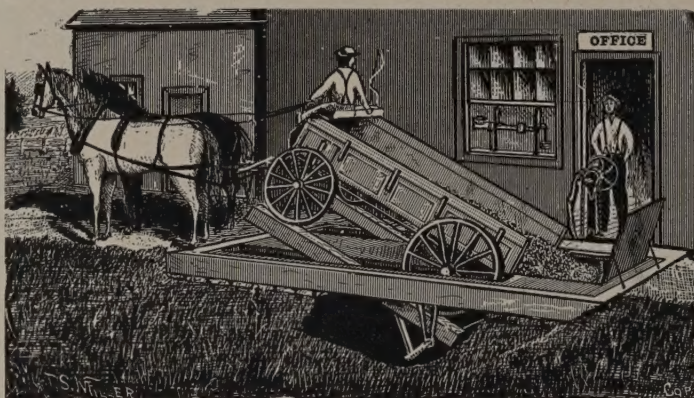
It should be mixed with such a portion of corn as can be afforded and the millstone should be set up close enough to crush all of the seed if possible, as the husk or outer covering if left unbroken has a tendency to irritate the intestinal canal, and so cause "scouring." Cleanings from buckwheat also often contain a good deal of foxtail seed, and the presence of a little buckwheat does not injure the feeding qualities of the mixture in the least. Indeed, I have often made a very respectable looking pile of feed by running buckwheat first through a fanning mill and then grinding all but the lightest part of the stuff blown out along with the seed screened out and a little dry corn.

When rye is grown it is quite an addition to the resources of the feed grinder, and is of itself one of the best of grains for feeding purposes. From its early period of ripening it can be used and push forward the hog crop at a rapid rate during the season when feeding is the most effective, that is during warm weather, because when ground and then soaked for awhile it puts flesh on hogs with great rapidity, while being devoid of the greatly heating qualities of corn under similar circumstances.

Where rye is ground for flour, from the toughness

grinding, that is, grinding for the general market, corn, rye and oats are the only grains which can be relied upon to furnish the raw material. For feed intended for horses or cows, oats with either corn or rye, or with both, will furnish a satisfactory article. If the feed is intended for hogs the oats are hardly a desirable addition; at least at the higher cost which they necessarily incur, the place of oats in the mixture being filled better by putting in bran or shorts. But that part of the operation generally falls to the feeder rather than the grinder.

Where an elevator or a mill is so located that grain can be purchased at favorable shipping rates and the power used is ample for the purpose, a good business may be done by grinding the lighter oats up with corn or rye and shipping into the dairy regions, where the



A CONTROLLABLE WAGON DUMP.

yearly increasing demand for pasture and hay lands is confining grain growing to closer quarters. The time seems now to be not far distant when even much of the hay will have to be shipped in to supply the wants of the cows which furnish the milk and butter for Chicago's rapidly increasing population.

From the fact that the offal from the immense flouring mills of the country enters very largely into the

A CONTROLLABLE WAGON DUMP.

One of the chief recommendations of a wagon dump should be simplicity of construction and ability to stand wear and rough usage. It should be ready for use at all times and perfectly reliable in its working and easily controlled by the operator.

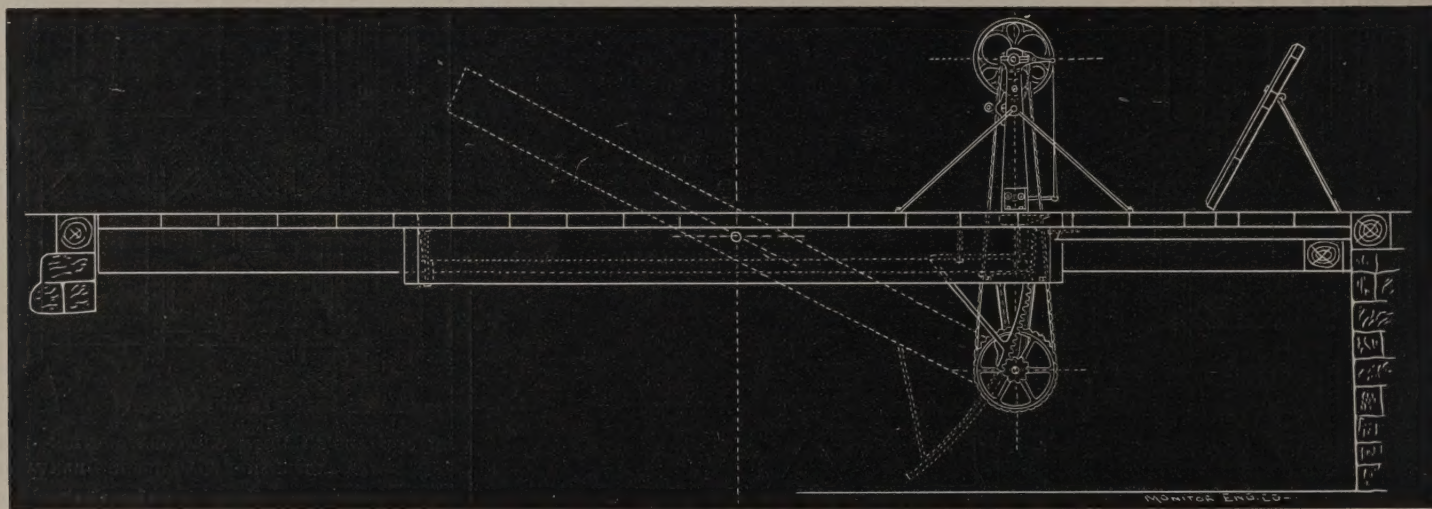
Savage & Love, the well-known manufacturers and dealers in elevator supplies, lay claim to these points in their Patent Controllable Wagon Dump, illustrations of which are herewith presented. This dump was patented in 1882, and all leading manufacturers of scales, recognizing its utility, make a special scale for it.

To the side of the ordinary dump-rails are attached spur segments, which are engaged with spur pinions fixed upon a shaft underneath and operated by means of a link belt and a pair of sprocket wheels in connection with a hand wheel, as is shown in the cuts, which illustrate the construction and method of operation in platform. The hand wheel turned in one direction lifts the rails to unload, and the reverse motion brings the rails back to their original position.

As its name implies, it is claimed to be perfectly controllable, a feature which renders practicable the combination of dump and scale on one platform or foundation, as is shown. The wagon may be driven upon the scale, weighed, dumped and reweighed, avoiding the annoyance and loss of time when the conditions

necessitate driving to the scale, then to the dump and back again to the scale for the weighing of the wagon.

This dump is always easily controlled by one operator; its motion is smooth and free from concussion or jar. It has been used for years and has not been known to have done any injury to horses, wagon, dump or scale. With each dump is furnished a build-



PLAN OF SAVAGE & LOVE'S PATENT CONTROLLABLE WAGON DUMP.

of its outer covering and the peculiar shape of its middlings, the offal forms a very good feeding substance, being excellent for growing pigs, calves, etc., as well as for dairy stock.

Barley is another grain whose early ripening brings it somewhat into use as a hog feed at certain seasons of the year, although it generally sells too high to allow of its permanent use in competition with corn. It is not as fattening, when ground, as rye meal, and like that requires soaking to get its full value.

But as its value for feeding purposes does not depend, as does its value for malting, greatly upon its color, it may often be used to good advantage as feed when its price for other purposes is below that of corn or rye. Like rye, too, barley should be finely ground to get the best results from its use, and the miller who grinds it at the same price as corn either does not do a good job or loses money by the operation. As a matter of fact, feed requires a fine, smooth, even quality of grinding for all kinds of grain if it is to reach its best estate.

In regard to what may be called commercial feed

supply of feed, a consideration of the proper mixing of feeds can scarcely be made a part of an article on feed grinding; but at some future time I may devote some attention to that subject, as in many places the country elevator is becoming as much an institution for importing feed as it is for handling or exporting grain.

The citizens and farmers of Montello, Wis., expect to erect a potato warehouse at that point. The farmers say that about 500 acres of potatoes will be planted in the vicinity of Montello this season.

There is a movement on foot among Kansas City grain dealers to get railroads in making up expense bills to leave off the name of country shippers and the name of the place where the shipment originated, stating only whether the grain was competitive, the rate, number of pounds and kind of grain. This, it is thought, will do away with purchasers of car lots taking the information procured from the present expense bills delivered them, and from the names thereby secured working the country shippers.

ing plan, with the aid of which any carpenter can construct it. The Patent Controllable Wagon Dump is manufactured only by Savage & Love, Rockford, Ill., from whom additional information and full particulars may be obtained.

It is claimed by those who have investigated that there is no reason why the soil and climate of a large portion of the state of Kansas should not produce a flax fiber adapted to compete with the Russian product in the European markets. Experiments will be made in regard to the growing of flax in that state.

There is a law in Indiana which compels all railroad corporations to cut each year, during July and August inclusive, all thistles, burs, docks and other noxious weeds growing on their right of way or other lands owned by them. The law also makes it a misdemeanor for any person or corporation to allow Canada thistles to grow on any land owned by them or on any highway. Thistle rid any section of the Russian weed; at least it ought to.

THE NEW BILL OF LADING.

The new bill of lading recently adopted by the Chicago & Grand Trunk Railway meets with the hearty approval of the merchants of New York City, and it is hoped that the other trunk lines will soon find it to their advantage to adopt it. The new bill is, it is urged, just what the commercial community has been trying to get for years. It would not be fair to say that any organized movement is on foot to divert traffic from the roads which will not adopt the new form, but there is certainly a feeling, particularly among the large receivers of eastbound merchandise on the New York Produce Exchange, that companies that use the new form should be given preference by shippers.

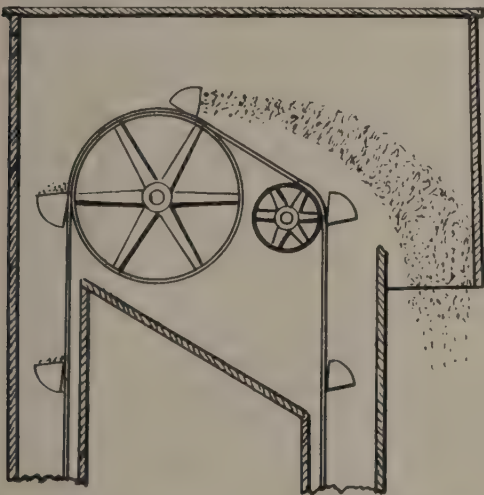
The new bill is a very simple affair. It is, in fact, nothing more than an ordinary form of receipt and leaves the whole question of carriers' liability to be determined by the common law in force in the various states, territories, provinces or foreign countries through which the merchandise may pass.

The uniform bill of lading has been in operation since January 1, when the official freight classification No. 12 went into effect. From the first the uniform bill has been the subject of general complaint from shippers. The Cincinnati Freight Bureau and other trade and freight organizations in Chicago and elsewhere have appealed to the Interstate Commerce Commission against many of its provisions, which are declared to be in contravention of common law. Among the objectionable features, as at first promulgated, was the "non-negotiable" clause, which was subsequently abrogated in deference to the widespread protests of shippers.

The bill, however, contains also a uniform general release from liability, failing to subscribe to which involves the penalty of a higher classification and an advanced rate of freight. There are numerous other stipulations which are calculated to lift liability from railroads in the transportation of tonnage. One of these seeks to relieve the common carriers from liability even when goods in transit are injured or destroyed "by negligence of said railroad or transportation companies or of their officers, agents or employees, or otherwise, while the same is in their care, custody or possession."

DEVICE FOR INCREASING CAPACITY OF ELEVATOR.

There are some reasons why elevators are not as satisfactory to the elevator man as might be wished,



DEVICE FOR INCREASING CAPACITY OF ELEVATOR.

and among others is the limitation of capacity. The capacity of an elevator is, of course, limited by the size of the buckets and by the number of feet they can be made to travel in a minute.

A special, if not a new, device is shown in the accompanying cut, which it will pay elevator men to give a trial. By having two pulleys in the elevator head instead of one, as is usual, the centrifugal force which has a tendency to throw the grain into the down leg of the elevator is checked, and the grain is thrown over the opening of the leg, as shown.

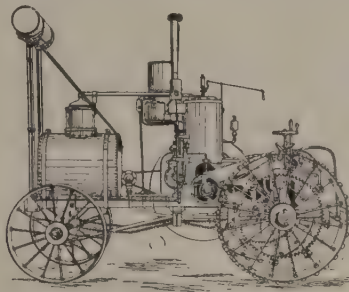
The application of this device and the position of the pulleys is clearly shown in the cut. If properly

arranged the speed of the belt can be materially increased and the capacity of the elevator increased accordingly.

A PORTABLE GASOLINE ENGINE.

We illustrate herewith a traction gasoline engine which is the result of several years' experimenting, and while this is not the first one that was constructed it is the first one that the builders have considered perfect, and they are now ready to fill orders for them.

They have been making stationary gasoline engines for several years, and to them we owe the credit of having built the first portable gasoline engine. It will



A PORTABLE GASOLINE ENGINE.

be seen that they lead by introducing the first traction gasoline engine. They have received thousands of letters urging them to construct this engine, and not a few orders for them, notwithstanding the fact that there was none built.

When it is taken into consideration that there is no fire, coal, wood or steam, no smoke, sparks, cinders or ashes, no boiler or steam, and numerous other things are dispensed with that are to be contended with in the steam traction engine, such as team, tank and man to haul water and fuel, as well as the hiring of an engineer, and you remember that this engine dispenses with all the above, you have only a meager idea of its many advantages.

The item of water alone will pay for a rig of this kind in a short time, as it will run on the road twelve hours, hauling the separator on less than one-half barrel of water, and will drive the separator all day on less than one barrel of water. Then as it is automatic, there is no fire or steam to require the attention of an engineer, and he is dispensed with. This engine can be started in the morning and run until noon without attention from anyone; and as all the bearings are supplied with oil cups that will run 8 to 12 hours without refilling, there is no possibility of their cutting.

The gasoline traction engine is nothing new so far as the engine is concerned; it is merely the appliance of this engine to this purpose that is a new feature, and gasoline engines have been pronounced by all to be the coming power, especially for farm and portable purposes, as there is no possibility of there being an explosion or causing a fire.

The cut shows just how it is constructed. Most of the weight is over the driving wheels, which gives it more advantage in hauling a load over rough and hilly ground. If you will write to the manufacturers, the Van Duzen Gas and Gasoline Engine Company of Cincinnati, Ohio, they will take pleasure in sending you one of their catalogues treating on their traction and portable engines.

The elevator men at Buffalo have yielded to the demands of vessel owners, restoring the steam shovels and reducing rates 25 cents per 1,000 bushels for steamers. The vessel men first asked a reduction; they got none. They threatened to take it into court; the steam shovels were withdrawn and rates raised. As a last resource the vessel men threatened to go into the elevator business, when the rates were lowered.

A carload of wheat was sold in Chicago recently which was placed in store in June, 1892, with instructions to hold for a better market. It has remained the property of the original owner ever since. The difference between the price maintaining when it was put in store and that obtained when it was sold, together with storage and insurance charges, but taking no account of interest, made a net loss to the owner of nearly 55 cents per bushel.

THE INCLINE ELEVATOR.

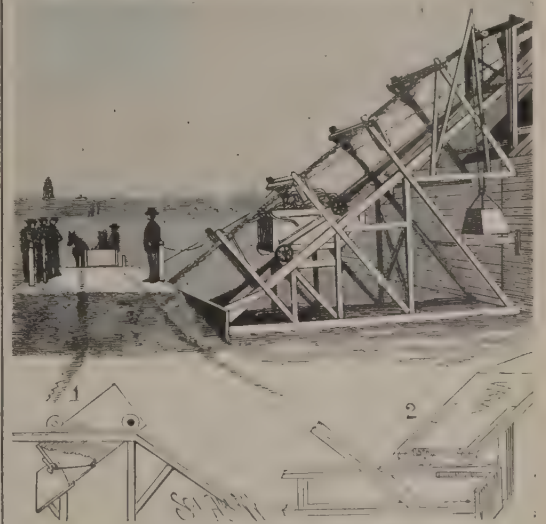
Anyone having to employ elevating apparatus and machinery in his business will at once recognize the practicability of elevating grain on an inclined plane. On an incline a weight is supported, not suspended, and everybody knows the difficulties attending the perpendicular elevation of large and heavy loads, not to mention the cost of an elaborate apparatus.

S. E. Kurtz of Greenfield, Iowa, patented April 3 an incline elevator, of which an illustration is given herewith. This machine is claimed to be one of the simplest and most practical elevating machines in existence, and may be used for elevating all kinds of grain, ore, etc.

It consists of a derrick, which may be made of pine lumber, forming inclined tracks, and a car having wheels on different planes. The car travels in a level position on the inclined tracks, and has a counterweight so adjusted as to regulate its descent. The capacity of the car is 50 bushels of ear corn or 100 bushels shelled grain. The car, when ready to receive grain, is at the bottom of the incline plane under the low down dump. The load is dumped into it from the wagon. A simple block and tackle furnishes leverage to make it an easy pull for a team to elevate its own load. The track on which the ratchet of the car travels is zigzag, preventing a crash if a break occurs.

The operation of the Incline Elevator is automatic and rapid. The loaded wagon is driven on common dump logs, located in the driveway, which is from two to five feet high, as desired. When the contents of the wagon are dumped into the car below the team is made to pull slightly to permit of the logs being locked. A rope is then attached to the rear axle of the wagon by a convenient device. The team is started and pulls the car to the top of the inclined tracks, where it dumps its contents into a chute leading into a small overhead car, to be conveyed to a bin for storage or direct into a car for shipment. The ratchet holds the car at the top, and the teamster can unfasten the rope without getting out of his wagon. A small rope is then pulled at the driveway, which throws the ratchet out of gear, and the car descends.

With this style of elevator simplicity constitutes its value, and in Mr. Kurtz's invention the only machinery is the wheels, the ratchet and the latches of the car door. Friction is reduced to a minimum, and no oiling is required. The power costs nothing, and the



THE INCLINE ELEVATOR.

dealer is enabled to dump the ear corn as well as the shelled grain, part of the storage room being a combination bin which may be changed in one minute from an ear corn crib to a shelled grain bin.

The manufacture of the Incline Elevator can be easily conducted, as the car only has to be made. H. Kurtz & Son, Greenfield, Iowa, are the manufacturers. Any further information may be obtained by applying to them.

The American Philosophical Society advocates a canal between Philadelphia and New York—otherwise the plan might have been thought feasible,

THE INTERNATIONAL EXHIBITION OF GRAIN CLEANING MACHINERY AT ST. PETERSBURG, RUSSIA.

BY ALFRED F. BENDER, ENGINEER.

Presuming that our far-off friends would be interested in the exhibits at our special International Exhibition of grain cleaning machines I beg to inform them that the little exhibition as a trifling thing, of endless significance, never was expected to last very long. It was opened March 14 and was closed March 28, having lasted two weeks. To show people the various kinds of grain cleaning and grading machinery would certainly take twice as much time if the selection of novelties in this line were ampler and our American friends were represented in a larger number.

Unfortunately there was not any machinery of the E. H. Pease Manufacturing Company of Racine, Wis., or any of the Johnson & Field Company. There was no exhibit of the Prinz & Rau Manufacturing Company of Milwaukee, while the only American exhibit consisted of five machines of the Richmond Manufacturing Company, an Empire Separator No. 2, close scourer No. 4, malt cleaner No. 5, Empire Receiving Separator No. 3, and brush machine No. 4.

Our old and quarrelsome friends and neighbors, the Germans, have done all in their power to be represented as fully as possible. We contemplate and fully appreciate the merits of a large variety of nice, neat and noiseless sky-blue painted machines of the Roeber Bros. of Wutha, Germany, which do excellent work both in cleaning and grading grains and grass seeds. We must acknowledge, likewise, the presence of quite a number of German triers of the Meyer Company of Kalk, near Koln, on the Rhine, with their characteristic cylindrical and revolving reels covered with perforated iron cloth. Both the former and the latter have really well deserved the gold medals they have been awarded by the decision of the Committee on Awards.

France was represented by two houses, Marot Bros. and M. Alfred Clert, both of Niort, Deux Sévres. Their machinery, though somewhat cumbersome and bulky when put together, does not fail in giving the best of satisfaction as to the grading work. Alfred Clert's machinery has a particular feature. It consists of two separate machines, each of which can be used separately or both together simultaneously, and can be taken apart like compound machinery.

There are, also, a few exhibits of our renowned English friends, such as the screens of the Penney Company, Limited, of Lincoln, England, machines (Patent Preston) of W. Rainforth & Sons, Lincoln, and fanning mills of John Backer of Wisbeach.

All these machines made their appearance with the claim that they have already attained and maintain a wide and bright reputation for the work performed.

Among the Russian, or so-called Russian, exhibits the first place was occupied by the acclimatized at the Libau German trier works of E. Schulte, who produces a number of cylindrical triers, which are much like those of the original German make, and intended for the same line of work.

Then there is the great and funny attraction, over which much fuss is made, the centrifugal grain sprayer or scatterer, a recent invention of the Count Berg, who is a heavy landowner in the Baltic district of this country. He claims to have obtained good results from his simple and (perhaps) practical machine,

which nobody here is likely to credit with the claimed merits. It obviously develops that whenever the grain is spread around on the earthy and dirty floor or ground it never can be expected to be sufficiently clean.

There is no possible way to get the grain, not only properly graded, as in any other machine giving distinct qualities of a certain number of standard grain sizes, but evenly sufficiently clean for grinding, milling or other home use or trade.

A far less bulky instrument, constructed on the same principles, likewise exhibited, was the "Velox" Centrifugal Spraying Grader invented by Sundren, a Swede. This scatters the grain around but one side of the machine some ten feet in front of the operator, and costs but about \$45. It does not require any large flywheel or long driving rope or extensive space about it to scatter the grain on; no bulky tackle is needed for suspending the feeding spout, as with the count's machine, and it renders quite as good service as does the former, to whoever wants to confine himself to but very imperfect work.

Our genuine home industry was represented in this exhibit but poorly. There were scarcely five or six

which comes near answering the requirements of our grain trade.

During the closing days of the exhibition the great attraction was the public tests of the American machines of the Richmond Manufacturing Company. The general impression was highly satisfactory, the machines having been declared to be giants compared with all other machines exhibited in respect to the amount of work done. There were but two of the Richmond machines tested, the one on grading oats and the other (the Empire Separator) on wheat. Both gave the best of satisfaction.

THE NEW CHARTER GAS ENGINE.

"The motor of the nineteenth century" has sometimes been the function claimed for the gas engine. There have been many attempts made to reduce the cost of motive power to a minimum, and to produce a motor, of whatever kind, which would be economical, reliable and safe.

The Charter Gas Engine Co. of Sterling, Ill., claim many points of excellence for their improved Charter

Gas Engine. The engine illustrated is of the style of general construction that the company has been building since January, 1890. No changes were made until January of the present year, when the cam motion was substituted for the eccentric in opening the exhaust valve, thereby obviating the little noise that had attended the opening of the valve. Besides the usual base, the new Charter Engine consists of a cylinder, piston, connecting rod, crank shaft and fly wheel.

The principle on which it operates is as follows: On the first out stroke of the piston a diluted mixture of gasoline and air is drawn into the cylinder through a check valve on the head of the cylinder, the check valve opening during the suction stroke and closing during the in stroke of the piston.

The mixture is compressed into the space between head of the cylinder and the piston during the in stroke, and the carbon is ignited by as safe and simple a device as possible. The air expanding by the

heat evolved, an impulse is given to the piston. On the piston reaching its second outstroke the exhaust is opened and remains open during the piston's second instroke, the products of combustion being expelled into the exhaust pot and from it conducted to outer air.

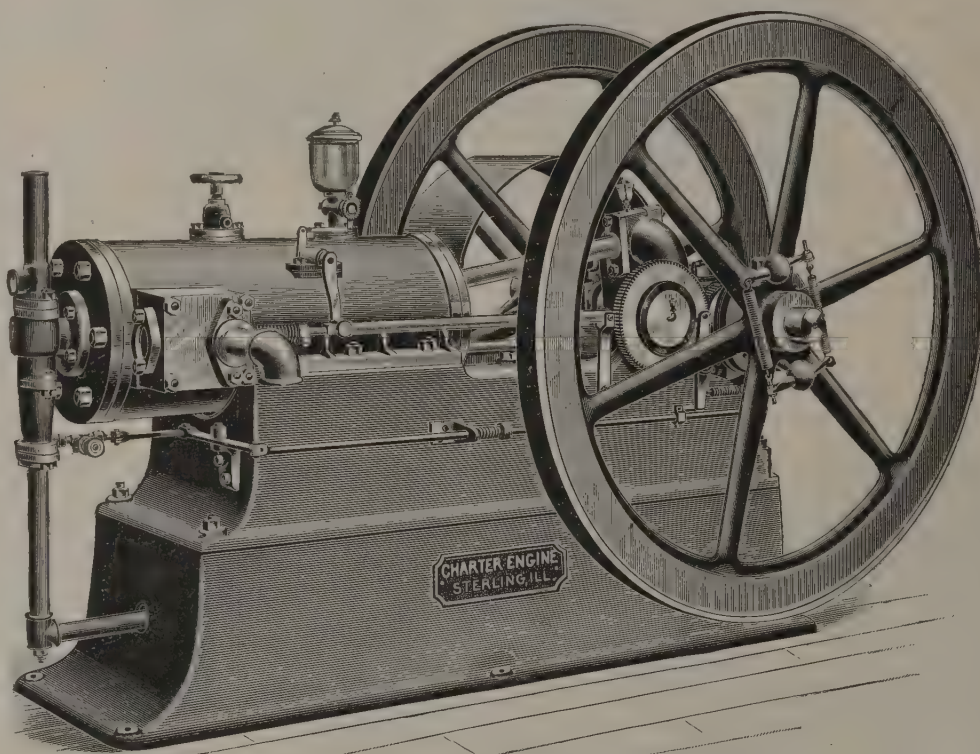
The governor, which is within the pulley, gives only as much gasoline as is needed to do the work, the amount used depending on the work done.

The makers claim that the Charter Engine is absolutely safe, the gasoline used never coming in contact with air except inside the iron suction pipe and iron cylinder of the engine, and the fact that insurance companies consider them not undesirable risks, is a guarantee.

The Charter is manufactured on the interchangeable system, the oilers are automatic, and its simplicity of construction and operation is such that it requires little attention.

These engines are made in different sizes, vertical and horizontal, and with single and double fly wheels. Those wishing further information can obtain such by applying to the manufacturers, Charter Gas Engine Co., Sterling, Ill.

Carelessness in baling hay for export shipment causes great annoyance to shippers. Almost every day bales are rejected by steamship companies and hay rejected at New York is worse than a total loss,



THE IMPROVED CHARTER GAS ENGINE.

Russian names to be mentioned, but among them we must notice the machinery of Cherepoff, the inventor of the first (historically) centrifugal spraying cleaner—a far more experimental than practical machine. There was Galotchkin, the inventor of a large and heavy grain separator and grader, which never will be able to compete with modern machinery in its line, especially when it is compared with small-sized machines doing a greater amount and better work.

The Russian manufacturers, having inherited from the defunct Valerian Tscherniajeff the idea of an improvement in the Russian fanning mill, a small local manufacturer has exhibited one of these improved fanning mills which is bearing Tscherniajeff's name and is labeled accordingly. To the latter class of machines belongs also the well-known Russian fanning separator of Waraksin's invention, which grades the grain both by size and weight, and does sufficiently good work for farm use.

Greater claims are being made for the recent invention of the grain dealer, Ivan Sitnichenko of Asoff, who has exhibited his Universal Separator and Grader combined, which he is going to have patented in Europe and the United States, believing it to be specially adapted to the elevator business and grain export trade.

Sometime in the future I will give the readers of the AMERICAN ELEVATOR AND GRAIN TRADE a short description of this somewhat interesting machine,

Queries and Replies.

Questions and answers are inserted under this head free of charge, and all are invited to avail themselves of this column.

No. 24. Plans for Small Elevator Wanted.—We want plans and suggestions for building a small corn elevator of, say, 3,000 to 5,000 bushels' capacity, with drive belt and elevators for handling corn rapidly with good results. We will be pleased to hear from readers of the AMERICAN ELEVATOR AND GRAIN TRADE on this subject, and any plans or suggestions will be thankfully received.—READER.

No. 25. Is Shipper Liable for Freight?—The Missouri Pacific Railroad has sued me for freight charges, and I would like to know what the readers of the AMERICAN ELEVATOR AND GRAIN TRADE think about it. The facts are these: I billed a car of wheat to shippers with the order, "Notify Leftwich, Hodgkins & Co., St. Louis, Mo." I did not sign over bill of lading. They paid the draft on the wheat all right. On Jan. 15, 1891, the wheat was turned over to them by the railroad. On February 11 Leftwich, Hodgkins & Co. failed. On May 12 the railroad notified me that the freight was not paid and that they were holding me for it, claiming that they had presented their freight bill on February 10 and payment had been refused. Last July or August they sued me. I beat them in the county court and they appealed. Has anyone had a similar suit, or does anyone know any thing about it? I would like to hear from some of the wholesale firms.—V. E. CHAMBERLIN, Powell, Neb.

ELEVATOR AND GRAIN INSURANCE.

The secretaries of several first-class flour mill mutual fire insurance companies have favored us with the following communications regarding elevator insurance and the advisability of elevator owners organizing an elevator owners' mutual fire insurance company:

A MUTUAL COMPANY WOULD PROVE PROFITABLE.

Editor American Elevator and Grain Trade:—Referring to your several inquiries, permit us to explain that it is the practice of this company to underwrite upon grain elevators and their stocks, located in Iowa or elsewhere within the United States, whenever the physical and moral conditions are considered acceptable. It must be conceded, however, that the numerous class of houses known as country elevators, because of temporary qualities, inadequate protection and bad fire record, appears, at least, to merit much of the disfavor accorded by insurers generally.

For this reason it is not unlikely that our joint stock friends, who still persist in devising tariffs to cover names instead of hazards, are charging too much for houses reasonably free from unfavorable class characteristics; but whether any of the Iowa contributors to your columns of the 15th ult. are suffering as a result of this course, it would be difficult from the much too meagre data disclosed by their correspondence to offer a trustworthy opinion.

A carefully conducted "mutual" elevator company of ample proportions would almost certainly prove profitable to its patrons, which, of course, is quite apart from determining the practicability of constructing one. The formation of such a company may be possible; but, in our judgment, it is involved with too much doubt to justify an attempt. This view of the matter does not arise from a want of confidence in the development of capable promoters, but through a belief in the insufficiency of obtainable and acceptable material, especially if operations are restricted within sectional limits. For one defect or another very many of the whole number of elevator risks must be declined, and not a few proprietors of the residue will refuse substantial support.

It is not pretended that these conclusions are drawn from wide observation and close study of the particular subject in hand; but they follow a knowledge acquired in the building and management of a successful mutual company in the interest of flouring mill and elevator owners. Our opinion is only submitted at your suggestion, and must not therefore, be understood as intended to discourage any present or prospective undertaking in the direction of a mutual exclusively

elevator organization. It is possible that some of the mutual flouring mill companies might be willing to cover a few of these elevators.

Yours truly,
W. H. CLARK,
Treasurer of the Ohio Millers' Mutual Fire Insurance Company.
Canton, Ohio.

GOOD FIELD FOR MUTUAL FIRE INSURANCE COMPANY.

Editor American Elevator and Grain Trade:—I do not see why there is not a large field for mutual elevator fire insurance companies. There is scarcely a railroad town in the state that has not some kind of an elevator, and if they will form themselves into a company it would make a very strong organization, in my opinion.

I would think that the best results could be obtained by keeping the territory bunched as much as possible at first, widening out as the intervening territory is well filled in. This will reduce the cost of inspections, and consequently the cost of insurance. For instance, suppose you commence by taking in Iowa, Nebraska, the Dakotas, Minnesota, Wisconsin, Illinois, Ohio, Indiana, Missouri and Kansas. That would give a large field, and as that territory was filled in with risks, take in a wider circle.

Competent inspectors must be had to visit each risk before accepting it, and in order to do that in a scattered territory too many inspectors would be required. It would be a good plan to not accept lines on an elevator that is leased, for the reason that lessee will insure his grain, consequently if there is any moral risk it is twice as great when there are two parties. Insuring the same as a department store with owners for each department is now considered a greater moral risk than a property of equal value owned by one firm or company.

We do not insure elevators except in case where it is as one risk with the mill, and then at the same rate and under the same form.

Yours,
J. T. SHARP,
Assistant Secretary Mill Owners' Mutual Fire Insurance Co. of Iowa.
Des Moines, Iowa.

A MILLERS' MUTUAL THAT INSURES ELEVATORS.

Editor American Elevator and Grain Trade:—In relation to insurance of elevators in Iowa and other states, I would say that this company would insure elevators in Iowa, as it has in nearly all of the northern states. In Minnesota we are carrying insurance on over 200 elevators, and could have had more, as they were offered, if we could have had an inspection report of them. I think that all of the millers' mutual fire insurance companies write elevator risks, and that owners of elevators could obtain insurance from them by making application, provided the risks were satisfactory. It should be borne in mind by the elevator people, however, that there are elevators and elevators, and that not all of them would be satisfactory risks. The construction, exposures and care given would all have to be taken into account in determining that point. Many elevator owners also would have to be educated up to the point where they would be willing to accept and act upon the suggestions made by the inspectors of the millers' fire insurance companies regarding improvements necessary to diminish the fire hazard. This is where many would be likely to give the traditional "kick;" but compliance with these suggestions is nevertheless essential in mutual insurance. The millers of the country have been pretty well schooled in this direction, and many of them comply willingly with all suggestions from the companies tending to increased safety.

Whether an elevator mutual fire insurance company could be made to pay its patrons I am not prepared to say. It would seem as though it ought. At the same time, with half a dozen millers' mutuals with years of experience, the most of them having a surplus, the interest from which pays all office expenses and some far in excess of that, it would look as though a company of the kind referred to were hardly necessary.

If the elevator owners are willing to join with the millers' companies in making their risks as little hazardous as possible, I believe that the companies would furnish the insurance at rates that would prove satisfactory.

From data given in the letters published in the April AMERICAN ELEVATOR AND GRAIN TRADE, I

should say that your correspondents were paying a higher rate than is necessary for selected risks; but no higher, I should think, than is charged by stock companies in other states. From the list of fires in the April issue of your journal, numbering nearly two dozen, it is quite apparent that losses are such as preclude the idea of "all profit" in elevator insurance.

Very truly yours,
A. T. DAVIS,
Secretary Michigan Millers' Mutual Fire Insurance Company.
Lansing, Mich.

THE ORGANIZATION OF AN ELEVATOR MUTUAL WOULD BE DIFFICULT.

Editor American Elevator and Grain Trade:—I have never given the subject of an elevator owners' mutual fire insurance company sufficient thought to speak fully of it. We have never considered that the stock companies' rates on elevators were as high as on mills in proportion to the hazard. It has never been our policy to write insurance on elevators only as connected with a milling plant, not considering it fair to our millers. For this and other reasons, we would not consider it advisable at this time to go into this line of insurance in any locality.

The data given in your Iowa correspondence is too meagre from which to judge the physical risk; but as compared with present stock rates on flour mills, it is my opinion that the elevator men are paying very moderate rates, and judging from the limited information given, I think that if our schedule was applied the basis rate would go higher in many cases than the present stock rate, thus making it almost impossible to save a great deal in net cost.

If an elevated mutual fire insurance company were to be organized, just as much care should be exercised in the selection of the risks as is practiced by the millers' companies, and it would, therefore, be possible to insure but a small per cent. of the elevators. This would make the undertaking a hard one. On account of the unusually low rate on elevators it would require nearly twice the number of elevators, if not a larger proportion, to secure an average than it does on flour mills. For this reason it would seem to be a very hard task, if not an almost hopeless one, to organize a good, sound elevator mutual fire insurance company.

Until such time as the elevator men are called upon to pay higher rates than they are now paying, I am inclined to believe that a movement to organize an elevator mutual fire insurance company would not receive general support from the elevator men. In this I may be wrong, for I do not know the general feeling.

Yours truly,
E. E. PERRY,
Secretary and Treasurer Indiana Millers' Mutual Fire Insurance Co.
Indianapolis, Ind.

SPOUTING GRAIN.



SPECULATOR.—It costs more to spout grain in this house than any I have visited.

CASHIER.—Ah! but you have probably put grain down instead of up the spout heretofore.

COMMUNICATED

[We invite correspondence from everyone in any way interested in the grain trade, on all topics connected therewith. We wish to see a general exchange of opinion on all subjects which pertain to the interest of the trade at large, or any branch of it.]

FAVORS ORGANIZATION.

Editor American Elevator and Grain Trade:—We would be in favor of any organization of grain dealers which would be aggressive and of mutual benefit to dealers generally, but we have not at present any definite plans.

Yours respectfully, F. MEEKER.
Lenora, Kan.

WILL JOIN AGAIN.

Editor American Elevator and Grain Trade:—The writer has belonged to a number of grain dealers' associations but so far has never derived any benefit from such a membership. Still if it can be shown that any good will result we are willing to join again. The present proposition is new to us, and we have therefore given it but little thought; hence, we can offer no suggestions at present. We will talk the matter over and write you again.

Respectfully yours, APRIL KANSAS.

FAVORS ELEVATOR OWNERS' MUTUAL.

Editor American Elevator and Grain Trade:—I am in favor of the Iowa elevator owners' mutual insurance company scheme, and think it will be all right. I have an elevator of 50,000 bushels' capacity. On the south side is an addition in which is a feed mill for grinding all kinds of mixed feed, meal, graham flour, bolted meal and buckwheat, but no wheat flour. Inclosed please find remittance, for which send me the AMERICAN ELEVATOR AND GRAIN TRADE another year.

Yours truly, W. H. STIPP.
State Center, Iowa.

DETROIT'S RECEIPTS INCREASED 10 PER CENT.

Editor American Elevator and Grain Trade:—Please permit the correction of an error in the article on "Detroit as a Primary Wheat Market," published in your excellent journal for April, as the error was an unintentional injustice to this market and does not conform to facts.

Our increase of receipts of wheat during 1893 amounted to almost 10 per cent., as compared with the record of 1892, and not, as stated, "almost 1 per cent." Arrivals at every other leading primary point showed a decrease of from 15 to 46 per cent.

Yours sincerely, GEO. M. LANE,
Secretary of the Board of Trade of Detroit.
Detroit, Mich.

TAX ELEVATOR MEN \$5 A YEAR FOR SITES.

Editor American Elevator and Grain Trade:—We were pleased to notice your remarks on "Rebates for Country Elevator Men" in the April issue of your valuable journal. All fair-minded men either in or out of the grain trade can but admit the present system to be unfair and unjust. While all grain dealers feel this to be so, yet this is not all.

On the Illinois Central Railroad dealers are not only compelled to furnish warehouses for the railroad company, but they are also compelled to pay \$5 for a lease for ground on which to build the elevator, cribs or other facilities to carry on the grain business. Some railroad companies have acknowledged that it was wrong in not affording elevators which were prepared to receive grain at all times some compensation for the money invested in said conveniences; but they claim that they have no choice in the matter, as the law will not allow them to do differently.

But here comes the Illinois Central Company arbitrarily demanding another \$5. It seems to us that if

the matter was properly taken up this wrong could be righted. Until last year the ground rent for elevators was free, but last year a demand of \$5 per year for rental was made, and the same demand was made again this year. Many of us refused to pay it as long as we could, but finally yielded.

GRAIN CO.

A PLAN FOR A KANSAS ORGANIZATION.

Editor American Elevator and Grain Trade:—The Kansas grain dealers have the greatest of reasons for organizing an association; and they are many, the first being for our own protection, as grain men are paying out at least \$500,000 in commissions alone, besides the shortage that occurs in having no one at the other end of the line to look after this very important part.

My plan of organizing would be as follows: Call a meeting and have it at some central point, say Salina, and draw up by-laws. Charge a reasonable fee for membership, and elect officers. Open up a grain firm in Kansas City run by men elected by the association. Pay him a liberal salary and give him our business, which he can transact on a salary only.

By this method \$300,000 or \$400,000 would be saved to the grain men of Kansas for a small outlay, instead of giving it to 100 or 200 different firms. By having one firm controlling such a large business we could have a "pull" with the railroads.

LION.

SENDING BIDS TO FARMERS SHOULD BE STOPPED.

Editor American Elevator and Grain Trade:—We are in favor of, and will aid in sustaining, an organization of grain dealers, and will state that the greatest abuse to be corrected is the sending out by members of Boards of Trade and dealers on them of market reports and wire or card bids to every farmer and grain raiser whose name they are able to get, offering to deal direct with them, and entirely ignoring the dealers, most of whom own elevators and are prepared to handle farmers' grain for a very small margin.

We think that every Board of Trade in the country should have a complete list of regular and legitimate dealers which should be open to all the members of the board, and the members forbidden to seek business outside of the list. This, we think, would correct the abuse and bring the country dealer and members of Boards of Trade in a closer relation, much to the advantage of both and not to any detriment to the farmer, who, nine times out of ten, when shipping his own grain does not realize as much as his local dealer would have paid him.

We think this is the greatest abuse to look after, and by far the most important for an organization such as is suggested to correct. Hoping that this matter will be brought before the Boards of Trade at all the principal receiving points,

Respectfully yours, MERRELL & MAY.
Hope, Kan.

DATING BACK BILLS OF LADING.

Editor American Elevator and Grain Trade:—We have a grievance which we desire to air in your journal regarding an abuse which has come to our notice during the past month. We allude to the fact that certain railroad agents in the West and Northwest have been dating back the bills of lading for bran received by them for shipment East, so as to favor the shippers who have time contracts to fill.

We have two cases before us where we can prove that goods shipped were not received or forwarded until four days after the date of the bills of lading. We have always believed in the inviolability of bills of lading when issued, but we are losing faith very fast. Unless the railroad company can explain the matter to our satisfaction, we will refuse to pay sight drafts until the arrival of the goods.

Why millers should insist upon receiving cash for one product of their mills and give 30 to 60 days' credit and an opportunity to examine the quality of the goods before payment on another, we cannot quite understand.

We would like to have the bran business put on a better basis than that now existing. The advantages seem to be all with the seller at present. He has choice of routes, extreme limit of time of shipment,

quantity put in each car so as to favor himself when the market is for or against him, and to crown all, he gets his bill of lading issued (either before or after loading), and then attaches a sight draft and deposits as cash in his nearest bank.

The buyer takes all the risk of delay in transportation, decline in the market, shortage in weight and deficiency in quality. "Can such things be, and overcome us like a summer's cloud?"

Yours truly, ROBT. McKNIGHT & SONS.
Philadelphia.

OUR BOSTON LETTER.

Editor American Elevator and Grain Trade:—Trade has been good for the past month, especially in oats, and the jobbers who have carried a large stock have made money, notwithstanding their prices have been a great many times lower than the shipping prices, showing that they are anxious to take in whatever profit they may have.

It has been slow work getting grain out of lake ports owing to the heavy arrivals of vessels. Clipped oats have become a great factor in this market, and generally low grade oats are salable only at a liberal discount.

The trade in spot stuff has been good, which is rather an uncommon thing with us.

Receipts and exports for the month of April, 1894, as compared with those of April of the preceding year follow:

RECEIPTS FOR APRIL.

Articles.	1894.	1893.
Cotton Seed Meal, tons.....	28	839
Corn, bushels.....	456,229	464,496
Wheat, bushels.....	176,888	40,626
Oats, bushels.....	326,175	512,894
Rye, bushels.....		445
Mill Feed, tons.....	1,299	1,108
Oatmeal, sacks.....	600	6,051
Oatmeal, barrels.....	3,245	2,020
Cornmeal, barrels.....	5,908	13,969
Barley, bushels.....	12,396	5,445
Malt, bushels.....	98,465	110,825
Hops, bales.....	871	238
Buckwheat, bushels.....	1,600	2,467
Flour, barrels.....	120,193	115,968
Flour, sacks.....	114,351	229,402
Hay, cars.....	1,652	1,650
Straw, cars.....	75	127

EXPORTS FOR APRIL.

Articles.	1894.	1893.
Wheat, bushels.....	361,990	27,436
Corn, bushels.....	714,047	248,823
Oats, bushels.....	4,911	77,045
Peas, bushels.....		3,582
Barley, bushels.....	600	11,193
Buckwheat, bushels.....	9,115	
Cornmeal, barrels.....	4,197	7,583
Oatmeal, barrels.....	576	1,243
Oatmeal, sacks.....	1,000	4,736
Flour, sacks.....	143,829	265,772
Flour, barrels.....	57,486	62,535
Mill Feed, bags.....	2,854	6,461
Hay, bales.....	57,394	25,635
Straw.....		

O. B. Emery & Co., South Waterboro, Maine, have dissolved, Mr. Emery retiring. The remaining partners will continue the business under the name of the South Waterboro Grain Company.

Monroe & Wilcox, Providence, R. I., have sold out to B. F. Monroe.

C. N. Moseley, Bristol, Vt., and Harraden & Lam-mess, Chelsea, Mass., have sold out.

Lapelle & Co.'s elevator at Swanton, Vt., was damaged by fire May 7 to the amount of \$30,000. Insured.

Burglars blew open the safe in the office of Torrence, Vary & Co., Lynn, Mass. They secured nothing, but did some damage to the office.

BUNKER HILL.

EXPERIENCE IN CONSIGNING.

Editor American Elevator and Grain Trade:—Regarding our experience in consigning grain we would say that we would prefer to sell grain at our stations to arrive, when we can. We then know absolutely how we are coming out. We consign considerable grain, however, especially if it is of good quality, as it usually brings us a premium.

It is a most suicidal policy for any shipper to over-estimate the weight or quality of his grain or in any way doctor up grain in a car. It simply gives him a temporary advantage, and he loses for the future the benefit of all doubts. On the other hand, if the grain

throughout the car is all alike, it does not matter how much it is mixed, so long as the grain on the bottom is as that which shows on the top. If he is careful about making his estimates as to condition and weights, he will build up for himself a reputation as being a good and reliable business man, and will in all cases get the benefit of a doubt.

I know of one large shipper of flax to Chicago whose test and quality seldom, if ever, varies from what it should be to the extent that the Chicago flaxseed inspector, when rushed, will give many of his cars but a glance, knowing the shipper was honest and that all the grain in the car was the same as that he saw on top.

We never find any trouble with state terminal weights on grain that we ship from the country to Minneapolis or Duluth. If there should be, the consignor must know that the commission man is not at all to blame for what he is powerless to control. Country shippers are frequently unjust in their criticisms of terminal weights, especially when the said terminal weighing is done by a reputable terminal elevator company together with the state weighmaster in a scale large enough to take the whole carload at once, and where the shipper's only means of getting at his weights is by weighing his wheat in wheelbarrows as he is loading.

There are undoubtedly dishonest commission men, but there are plenty of reputable, responsible firms whose integrity is beyond question. Many shippers also are induced to consign grain or do business with irresponsible commission men who offer to do their business too cheap. We pay more to-day to our commission men than the price for which others offer to perform the same services, knowing that no firm can remain responsible and give us good service without getting just and equitable pay for the services they render.

Very truly yours, F. H. PEAVEY & Co.
Minneapolis, Minn.

OPENING FOR ELEVATOR AT VELASCO.

Editor American Elevator and Grain Trade:—I have at hand your issue of April, and I am very much interested in your numerous comments in regard to the grain trade of the West seeking for routes other than the long rail route to the Atlantic coast for export.

It is a fact not to be cast aside by eastern dealers and exporters that a port on the gulf will in the near future cut a considerable swath in the export grain business of the West. New Orleans last year for the first time made the record of exporting more grain than any other port in the United States during the month of February.

Now, I wish to offer a few points for the information of the grain men, taking the expressed sentiments of Western dealers as it was shown in convention at Wichita. The new life manifested in the South, and especially in Texas, by the throng of emigration from northern and western points to this state, and more especially along the coast country, is bringing into notice the great and undeveloped industries in which this country abounds.

A port at the mouth of the Brazos River, which is developed by private capital, now surpasses any port on the Texas coast. Its future may be predicted beyond any degree of a doubt: In a few years the surplus grain of the North and West will find at Velasco a market for export equal to any in the United States.

A word to the wise is sufficient. A good elevator here will open the floodgates and set in motion the traffic of the western farmer and grain dealers. A glance at the map will at once show anyone the advantages of this location. What man could not accomplish nature has done.

There are many reasons why the port at Velasco will be a success as a grain exporting port:

We have more water over the bar than any other Texas port.

We have a perfectly safe harbor, surpassed by none and equaled by few.

We will never be blockaded by the icy hand of Jack Frost, either by rail or water.

There is 300 to 1,500 miles' shorter rail haul from the grain fields of the West than to the New Orleans or Atlantic ports, with a down-hill pull, said to aver-

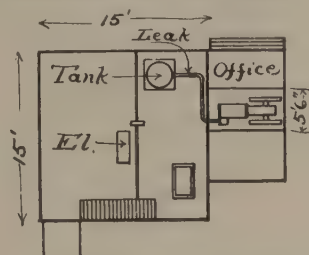
age 18 inches to the mile. This gives a south-bound train superior advantages in the haul, and allows larger trains, and consequently cheaper. A rich field is now open here for someone with capital and experience in the elevator and grain or milling business. I would be glad to furnish further information to those desiring it.

The recent convention at Wichita, Kan., is an additional evidence and expression of the desires of the western dealer to send his grain via gulf ports, and the building of the San Antonio & Gulf Shore Railroad from San Antonio to Velasco, and the expectation of two other trunk lines within the next year, are straws which show the way the wind blows.

Yours,
MARTIN ARMSTRONG.
Velasco, Texas.

AN ELEVATOR MAN'S EXPERIENCE WITH GASOLINE.

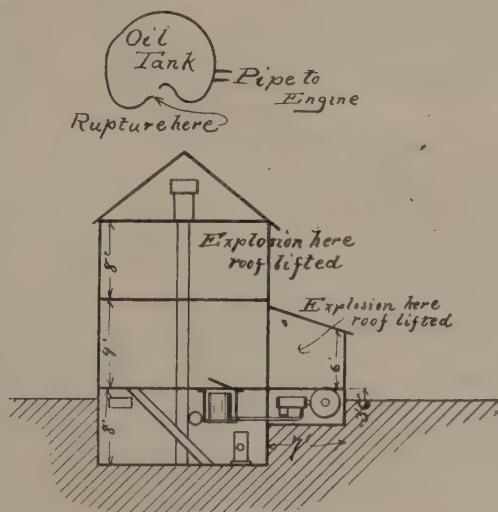
It is not every elevator man that thinks he knows all about gas and gasoline engines, but there are some, and they show their supreme contempt for experts in this line by ignoring in toto the printed instructions



ARRANGEMENT OF BASEMENT.

sent out with each engine. One of the know-it-all class lives, or rather did live, at last accounts, in the rich grain-growing district of the Mississippi Valley. He bought a gasoline engine, dug a hole in the middle of his office and set the engine therein. Then he constructed a hanging shelf in the basement and set the tank for storing the gasoline in upon it, as is shown in our illustration, although the printed instructions plainly warned him against setting it inside the building.

The basement was eight feet deep, and ventilation was supposed to be secured by means of a small win-



CROSS SECTION OF ELEVATOR.

dow on a level with the dirt banked about the building. One day two men were in the basement putting a new pulley on the main line shaft. After the elevator had been running awhile during the experiments an explosion occurred in the top story and blew off the roof. The first explosion occurred in the top story, and is explained by the fact that the gas, which is known to have been leaking out the pipe leading from the tank to the engine, is heavier than air, hence it sank to the floor of the basement, and was taken by the elevator cups to the top of the elevator, where the heat of a journal or a spark from a passing engine ignited it. The roof was blown off.

The fire immediately traveled down the elevator leg and an explosion occurred in the basement, badly burning the two men working there, and breaking in

the tank, as is shown in cut. The tank did not explode. Later an explosion occurred above the engine and lifted the roof of the engine room. The fire was quickly extinguished, and it was found that the engine was uninjured and that the intermediate floors of the main building showed no trace of explosion or fire. The engine was shortly afterward started to running again, but with the tank on the outside of the building.

The gas from gasoline is a dangerous explosive, and every precaution should be taken to keep it out of the building. No one can afford to ignore the printed instructions in this matter.

HAY IMPORTS EXCEED EXPORTS.

Hay aggregating 8,577 tons, valued at \$74,459, was imported during March, according to the last report of the Bureau of Statistics, against 15,484 tons, valued at \$138,032, imported during March preceding; and during the nine months ending with March 57,996 tons, valued at \$517,192, were imported, against 70,828 tons, valued at \$643,987, imported during the corresponding months ending with March preceding.

Of imported hay we exported none in March or in March, 1893; and during the nine months ending with March 229 tons, valued at \$2,026, were exported, against none exported during the corresponding months ending with March, 1893.

We exported 4,741 tons of domestic hay, valued at \$76,295, in March, against 2,206 tons, valued at \$31,864, in March, 1893; and during the nine months ending with March 40,487 tons, valued at \$660,818, were exported, against 25,660 tons, valued at \$405,230, exported during the corresponding months ending with March, 1893.

IMPORTS AND EXPORTS OF FOREIGN BREADSTUFFS.

According to the report of the Bureau of Statistics the total value of breadstuffs imported during March was \$94,348, against imports valued at \$173,763 in March preceding; and during the nine months ending with March breadstuffs valued at \$1,661,517 were imported, against an amount valued at \$2,133,649 imported during the corresponding months ending with March preceding.

Barley aggregating 707,332 bushels, valued at \$320,814, was imported during the nine months ending with March, against 1,801,694 bushels, valued at \$843,998, imported during the corresponding months preceding. Corn amounting to 2,066 bushels, valued at \$1,402, was imported during the nine months ending with March, against 1,702 bushels, valued at \$1,186, imported during the corresponding months preceding.

There were 3,402 bushels of oats, valued at \$1,354, imported during the nine months ending with March, against 11,250 bushels, valued at \$5,383, imported during the corresponding months preceding. There were 50 bushels of rye imported during the nine months ending with March, against 143 bushels imported during the corresponding months preceding.

Wheat aggregating 872,396 bushels, valued at \$582,679, was imported during the nine months ending with March, against 736,839 bushels, valued at \$522,833, imported during the corresponding months ending with March preceding.

Of imported breadstuffs an amount valued at \$21,368 was exported during March, against an amount valued at \$27,196 exported during March, 1893; and during the nine months ending with March breadstuffs valued at \$38,164 were exported, against an amount valued at \$38,648 exported during the corresponding months ending with March, 1893. Barley amounting to 11,175 bushels, valued at \$5,604, was exported during the nine months ending with March, against 33,983 bushels, valued at \$16,993, exported during the corresponding months ending with March preceding. Wheat aggregating 40,564 bushels, valued at \$24,639, was exported during the nine months ending with March, against 523,544 bushels, valued at \$358,889, exported during the corresponding months ending with March preceding.

Under the firm name of *cicada septemdecim* the seventeen-year locust has begun business in different sections of the country.



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ADVERTISING.

This paper has a large circulation among the elevator men and grain dealers of the country, and is the best medium in the United States for reaching this trade. Advertising rates made known upon application.

CORRESPONDENCE.

We solicit correspondence upon all topics of interest connected with the handling of grain or cognate subjects.

CHICAGO, ILL., MAY 15, 1894.

THE ELEVATOR INTEREST IN THE NORTHWEST.

Our excellent Minneapolis contemporary, the *Northwestern Miller*, has made a discovery, which it exploits in a page of editorial. It is that the elevator interest in the Northwest is bestriding that section like a huge Colossus; that is one of the fabled genii, let out of the bottle by the miller himself; that it is a fungus growth; that it is the Russian thistle of the northwestern trade; a Bishop of Bingen amid his store of grain, and lots of other things. No few words of comment can fairly represent our contemporary; so we republish its article in full on another page. It is a curious indictment which our readers will enjoy; and reading it will hesitate whether to most admire the trenchant pen or the nerve in assuming what the proper functions of an elevator are.

He boldly states, as if it were so axiomatic as to pass uncontradicted, that the proper function of an elevator man is to store grain and collect storage charges; and assumes that when he goes further and buys grain he is interfering with somebody else's divine right to own grain, simply because he does not intend to grind it. But this is only a part of his indictment. The other most important point is that the elevator man won't speculate on future values, but sells against his purchases. Consequently the elevator man is against the Hatch bill, against the miller, and is a bad man, whom the miller ought to suppress.

All this really seems very funny. The elevator man is doing just what the old-time Millers' Association of Minneapolis did for years, and what many millers are doing to-day. Anybody has a right to buy grain and hypothecate the grain if he wants to. The miller who objects to buying grain of the elevator man can buy it of the farmer if he prefers. In fact, anybody who wants to help carry the wheat crop against the time it is needed by millers or exporters can do so. But it is certain that if there is to be a market, somebody must buy the grain when the

farmer wants to sell; somebody must advance the money. One milling firm at Minneapolis lately bought three and a half million bushels of grain from one of these bad elevator men. It could have been bought last fall or winter from the farmers just as well. Somebody had to buy it and store it, and take care of it. The people who advanced money were certainly entitled to some compensation. Our contemporary admits this in part, but its additional grievance is that the elevator man did not speculate on this grain, but sold against it, content with a certain profit for the service. It is a curious indictment and a still more curious reason to allege why the Hatch bill should pass—so that people who bought grain would have to speculate.

PUBLIC ELEVATORS AND THE GRAIN DEALERS.

The rather mild report of the majority of the committee appointed by the Chicago Board of Trade to investigate the methods of the men and firms conducting the public elevators of this city, was not received by the members of the Board with enthusiasm. On the contrary; a demand was made over several hundred signatures, that after the month of June, no grain elevator be made regular whose proprietors shall be directly or indirectly engaged in buying or selling, receiving or shipping, or cleaning or mixing grain.

The grain dealers who are not elevator men certainly make out a strong case against the dealers who own public warehouses or who are interested in the cleaning or mixing of grain. As public warehousemen the latter are not obliged to deliver the identical grain, so that they virtually have a franchise to skim the trade, keeping the best for themselves and holding the skin grades for storage charges or for delivery on other people's contracts. That this is a disadvantage to the other dealers and an incubus on the market, needs no argument. There is but one fair thing to do, and that is to declare houses irregular whose owners are in the grain trade. This is what the rules originally contemplated, and the intent of the rules should be carried out.

RECOMPENSE FOR COUNTRY ELEVATOR MEN.

In view of the fact that many country elevator men perform a duty that carriers are supposed to perform and are required by law in some states to perform, it seems that the elevator men are justly entitled to some recompense from carriers for performing this duty for them. Before the interstate commerce law went into effect many country elevator men were given a rebate of 2 to 5 cents per 100 pounds on all grain shipped from their houses. The irregular buyer and the scoop shovel shipper did not worry him. He bought clothes from first hands, and his children did not cry for bread.

Now all is changed, the country elevator man is given no reward for collecting grain and shipping it over carrier's line, it matters not whether he operates his house as a public or a private warehouse. The irregular shipper is given the same rate as the elevator man, who, at large expense, keeps his house open the year around, and continues to collect small loads of grain from different parts of the surrounding country for shipment; and what is even a greater injustice, the track shipper is frequently given cars ahead of the elevator man and allowed to hold them longer for loading, and without charge for delay.

When all these points are considered, it will be clear to readers that the grain dealer at many country points is placed at a disadvantage by building an elevator. This should not be. Elevator men deserve to be favored by the carrier for performing part of its duties, and should be

given a rebate on all shipments to store grain free three days for all comers. He should be favored by carrier as well as encouraged and protected by the town to which he attracts much country trade at all seasons of the year.

We have been favored by a number of communications from Nebraska dealers on the subject of storing three days free for all comers and loading into cars in return for a rebate from carrier on all shipments made. These letters show that there is a crying need of action on the part of elevator owners. One correspondent tells of the startling result of the Missouri Pacific's narrow-minded policy. At one station along its line are three idle elevators. Idle because their owners were discriminated against and in favor of the track shipper. It is time elevator men were joining hands and acting together for the preservation and advancement of their business. The traffic managers should be called to their senses and a picture of their roads destitute of open grain elevators shown to them. Each will admit that same would be a deplorable condition, and that it would be impossible for them to handle the crops with double their present rolling stock were all the elevators closed. Elevator men cannot expect to gain any favor or even that treatment which in justice and fairness they are entitled to receive, unless they combine and fight for it.

AN UNJUST DEMAND OF ELEVATOR MEN.

The Illinois Central Railroad Company, which is known as the Biggest Hog of all railroad hogs, has adopted a new plan for encouraging elevator men in building elevators along its line to relieve it of the expense of providing and operating grain warehouses as is provided by law.

Until last year this company, like other Western roads, gladly gave sites along its tracks free to all elevator men upon which to erect grain elevators. One clause of its contract with the elevator men was that it should not be liable for any damages caused by sparks from its engines, but the Iowa Supreme Court decided the clause void. Last year the Illinois Central wanted money and probably did not care for any more elevators, so it demanded \$5 for every elevator built upon its right of way. As is shown by a communication in this issue the elevator men firmly protested for a time, but finally gave up and paid it, supposing, of course, that payment would settle the matter and that they would be pestered no farther.

They were mistaken. The payment of last year's demand only served to sharpen the appetite of the hog and it is now demanding another \$5. Whether the elevator men will tolerate this extortion remains to be seen, but they can prevent it if they will. The Illinois law provides that all railroad companies in this state carrying freight shall and they are hereby required to build and maintain depots for the protection of shippers of freight, where they are in the practice of receiving and delivering freight.

The law requires the Illinois Central to provide depots for the protection of grain. Since the elevator men provide these depots and employ men and machinery to load it into the Illinois Central's cars, the railroad company should pay the elevator men for services rendered, instead of fleecing them out of \$5 every year. The more willingly the elevator men submit to the robbery the larger will be the sum the Central will try to extort next year. No carrier can use a right of way that was obtained by condemnation for any purpose other than the transportation of passengers and freight, and if it leases any part of such right of way for purposes other than that of a carrier the ground unused for railroad purposes and the rent therefor falls to the original owner. We would be pleased to hear from others on this subject.

We propose to get at the right of this question and any information from elevator men will materially assist us.

THE GRAIN CLEANING EXHIBITION AT ST. PETERSBURG.

On another page we publish an interesting account from the pen of Mr. Alfred F. Bender of the International Exhibition of Grain Cleaning Machinery, lately held at St. Petersburg. It is a matter of regret that American machinery was not more fully represented; for as we have pointed out, this exhibition is but one of many indications of the progress which the Russian people are making in their struggle for the grain markets of the world, and offered a rare opportunity for extending the fame of American machinery. And whether they use our machinery or not, Russia seems bound to adopt distinctly modern methods in the handling of her grain.

It must be remembered that the Russia of today is not the Russia of twenty or even ten years ago. The Imperial Government is bending its energies toward the development of Russian resources and the improvement of commercial methods. The progress already made in this direction is instanced by the history of the new port, the Chicago of Russia, and its elevator system. With a soil of great fertility, cheap labor and modern methods of handling grain, it is no wonder that Russia is becoming so large a factor in the world's grain markets.

DATING BACK BILLS OF LADING.

In our "Communicated" columns this number is a just complaint by an Eastern buyer against railroad agents at Western points for dating back bills of lading for bran received by them for shipment.

This pernicious practice does much injury to the receivers and opens a wide field for fraud and deception. The markets often fluctuate considerably in the course of three or four days, and the Eastern buyer may lose customers and much business by promising goods for delivery which owing to the deceit practised by the shipper will not arrive until a week later than expected. The miller who indulges in sharp practices cannot expect any receiver to make a special effort to advance or protect his interests.

As our informant says, the bran business should be put on a better basis, and it surely will be if the miller continues to indulge in the sharp practice complained of. The Eastern buyers will be compelled, as a means of self-protection, to refuse payment until arrival of goods. It will be a repetition of the killing of the goose that laid the golden egg.

ORGANIZATION IN KANSAS.

As in our last number, so in this number, we publish letters from Kansas grain dealers favoring the organization of an active, aggressive state grain dealers' association. We would be pleased to hear from others on the same subject. The majority of the dealers of that state feel the need of a strong organization and seem to be anxious to act.

The dealers of that state would find a well-organized association, one that was earnestly supported by money and active work, would bring large returns for every cent invested. An association with an able, energetic secretary who was paid to devote his entire time to the advancement of the mutual interests of members could earn a good salary a dozen times a year for the members, even were the membership small.

The condition of the business is far from being satisfactory in Kansas as well as in other states. If only 100 dealers would join together, stifle all petty jealousies, and earnestly work for the advancement of their mutual interests, the

returns would be over 100 per cent. every month. It is so in Northwestern Iowa and in Southern Pennsylvania. It should be so in many other districts. The Kansas dealers need a few strong leaders to point out the way and take an active part in the work.

EXPORT GRAIN VIA GULF PORTS.

The Grain Congress at Wichita last month was well attended, but little work of value to the grain dealers of Kansas was accomplished. We had hoped that a move would be inaugurated which would lead to the organization of a state grain dealers' association, but we hoped in vain. The Southern routes for export grain, especially those via New Orleans and Galveston, were well advertised and it may be that trade will be attracted that way.

New Orleans is working hard to bring this about, and another grain congress will be held in that city June 12. Any amount of spirited rivalry for the export grain trade of the Southwest among the gulf ports cannot help but work to the advantage of each. This number contains an illustration of an elevator erected at New Orleans last year, also a letter from a gentleman at Velasco, Texas, where an elevator is wanted. New Orleans and Galveston both have facilities for handling grain for export. Velasco and Mobile each have deep water harbors, and will not be without grain elevators long.

It seems that each of the Southern ports has awakened to the possibility of becoming a great export grain port and each proposes to work hard to secure its share of the business.

HATCH'S "HONEST MARKET."

The "combination of humbug and ignorance," as Representative Quigg of New York has aptly termed the Hatch bill, having been reported to the House, will come up for action after the appropriation bills are disposed of. That it will pass by a large majority is, of course, assured, though if members voted their sentiments instead of voicing the prejudices of their constituents, this would by no means be certain. The senate will hardly act on the bill this session. It has its hands and heads full of the tariff, and action is more likely to be delayed until the session of next December.

Mr. Hatch's new bill is but little better than its predecessors. The Hannibal statesman vainly imagines that he has hit the short seller without striking the buyers. He thinks that his bill will restore an "honest market" by relieving producers from the "competition of fictitious sales," and that his law will "restore the law of supply and demand." He likewise states for the fiftieth time that the operation of his bill will injure no "legitimate interest." Here is where the ignorance or humbug of the bill, or both, comes in. Mr. Hatch either does not understand modern trade usages, or, understanding them, is willing to inflict untold mischief for the sake of riding his hobby. It is an edifying spectacle.

THE advantages of being careful to report correctly the weight and quality of each car of grain shipped and to consign it to a responsible commission house are strongly set forth by a correspondent in this number. Plugging loads and haggling over a commission will ever prove unprofitable. One plugged load will cast a suspicion about every car consigned by that shipper that 100 cars cannot remove, and the knowledge that the shipper has tried to deceive is not likely to encourage a commission man to sit up nights to devise ways to dispose of the shipper's grain at a good figure. Commission men will make a living out of their business, but they cannot do it honestly unless a fair percentage is paid for their services. Cheap men at best are always the most expensive.

MUTUAL INSURANCE FOR ELEVATORS AND GRAIN.

It is our firm conviction that no subject can, at the present time, engage the attention of elevator men with greater likelihood of advantage than mutual insurance. The letters published last month from the grain men of one state alone are quite sufficient to show the interest felt. It is purely a business question. It is one which can be discussed without being obscured by partisan or other prejudice and determined solely as a matter of good or bad business policy.

And the present is the most opportune time to commence the agitation for one or more mutual insurance companies, which shall duly protect elevator risks, unless grain men can find a refuge in some of the strong mutual companies already in the field and writing cognate risks. For, unless all signs fail, nearly every species of property will be confronted with higher rates by the stock companies. Rates have already been advanced over a large section of the country, and the advance will doubtless be made general. The stock companies have had a bad, not to say disastrous, year. In 1893 nearly 40 of them failed or reinsured their risks. The underwriting business is in a state of panic; and they know of only one way to recoup themselves and that is by advancing rates. This is unavoidable, as Mr. Clark of the Ohio Millers' Mutual says, so long as the stock companies "persist in devising tariffs to cover names instead of hazards"—an epigram that puts the whole matter in a nutshell. "Adequate rate" is the watchword of stock insurance companies. "Good hazard" is that of successful mutuals.

We publish elsewhere in this issue letters from officials of several of the millers' companies. It will be seen that two of these companies, the Michigan and Ohio mutuals, insure elevators when the moral and physical hazard is good; in other words, the name "elevator" does not frighten them when the risk is all right. Mr. Perry thinks the rate on elevators is comparatively low, as compared with flour mills. This may be true in some instances; but it certainly is not true of the Northwest. Mr. Sharp of the Iowa Mill Owners' Mutual, the oldest of the millers' companies, sees no reason why a mutual elevator insurance company might not be formed and successfully operated, and gives some excellent hints as to the lines on which such a company should be operated; hints that should have due weight, coming from an old and highly successful company.

It will be seen that all of these gentlemen who have favored our readers with their views very properly emphasize the fact that many elevators are poor risks. This is true; and any scheme for mutual elevator insurance should bear in mind Mr. Clark's aphorism, to insure hazards and not names. Not one of the millers' mutuals would be in existence to-day had they insured flour mills indiscriminately. It is "Selection, Inspection, Protection" that has made them successful. The same policy would make a mutual elevator company as valuable to grain men as these mutuals have been to millers; and in the past eighteen years they have saved millions to the milling fraternity, not only in premiums paid to the mutuals, but in keeping down the rates of the stock companies. In Iowa, for instance, the anti-coinsurance bill having become a law, the stock companies are indulging freely in threats of increased rates. Whatever may be the merits or demerits of such a law, the existence of strong mutual companies has always acted as a deterrent to keep down the rates of stock companies.

So let elevator men agitate the question. There is room for several good first-class elevator mutuals. Give us your views; send data; talk the matter over with your neighbors, and a mutual insurance company for elevators will soon be a fact.

EDITORIAL MENTION

It seems that the Grain Dealers' Association of the Cumberland Valley, Pa., is well supported by those doing business in that district, for we are informed that the association advanced the price of corn and of oats recently.

EVERY country town should in behalf of justice and its own interests charge a license fee of \$50 a month for all irregular grain buyers, and thereby protect the business of the elevator man who pays taxes to support its schools and government.

If you have gasoline or expect to have it about your elevator you will profit by reading "An Elevator Man's Experience with Gasoline" published in this number. Even an elevator man cannot always have his own way in handling this fluid.

THE wheat market has again been indulging in what must soon become a monotonous pastime—that of smashing all previous records. Anyone who will disclose the lowest figure wheat will reach will receive a large reward from many anxious bulls.

PRESIDENT VAN HORN of the Canadian Pacific is the latest propagator of extreme bullish views on wheat. He says that within two years wheat will go to \$2 per bushel. It is just possible that Mr. Van Horn is biased in his views by the fact that farmers need encouragement to plant wheat at all.

W. S. SEAVENS lately convinced some members of the Chicago Board of Trade that chess was not degenerated wheat. He planted some of the chess and raised quite a crop which he exhibited. The wonder is that any are found who need to be convinced of what science demonstrated years ago.

How little the government crop reports actually influence dealers was shown by the reception of the last one. It was quite bullish in its tenor and it was expected that the market would respond. It did, but not in the way anticipated. July wheat sold off about a cent, showing that the crop report's tales of damage were not believed.

HAY was a profitable crop last year and many elevator men put in a baling press and made a good thing out of it. It promises to be equally profitable this year, and no doubt many elevator men will bale and ship hay for the first time. Through the courtesy of K. M. Turner of the Famous Manufacturing Company we are enabled to present in this number an article on "Baling and Shipping Hay," which will prove interesting to those experienced in the business as well as tyros.

THE retirement of many small grist mills during the five last years has left many towns without any source of ground feed except that they ship it in. The high freight rates in many cases prevent this being done, so the elevator men have stepped in and filled the gap by putting in a feed mill. A number have clinched their hold on the farmers' patronage and made a good thing out of the local trade by so doing. Very few are without the necessary power and operatives, so that all they need to buy is a good feed mill. This gives more employment to the power and to the help which are idle much of the time and brings in ample returns on the investment. We present in this number an article

on "Feed Grinding" from one who has had years of experience in the business.

Few country elevator men make a living out of their business. The reasons for this are many. The carrier is slow to give him cars, is slow to deliver the grain at destination on a declining market, his grain leaks from old cars in transit, is stolen from carrier's yards and is docked for shrinkage forty years hence by the terminal elevator man. No wonder his profits are slim.

THE suit of The Knickerbocker Company of Jackson, Mich., against the Vortex Dust Collector Company of Milwaukee, and Huyett & Smith Company of Detroit, for infringing the patent on which the Cyclone Dust Collector is based, was decided on May 1, in favor of the plaintiff, in the United States Court, all the claims of the plaintiff being sustained. It is understood that The Knickerbocker Company will make a fair offer of settlement with the users of infringing machines.

WE have received from Ferrell, Prame & Ozier, Saginaw, Mich., a neat pamphlet illustrating and describing the different sizes of their Clipper Grain and Seed Cleaner, also a reprint of a couple of score of testimonials from users, which, after all, is about the best way of judging the merits of a machine. We notice among the users such names as those of The Albert Dickinson Company, D. M. Ferry & Co., besides millers and grain dealers, showing the wide range of use to which the Clipper has been put.

MANY will regret to hear of the resignation of Prof. C. V. Riley, the entomologist of the Agricultural Department. Prof. Riley is one of the most famous "bugologists" of the present age, and has done a really valuable work for his country and the rest of the world. It will be remembered that he advocated peculiar measures against the grasshoppers in the years when these pests first became troublesome. His remedy consisted in simply eating the grasshoppers. He demonstrated that they were edible and really delicious, but somehow people did not take kindly to the suggestion.

IN the last report of the Agricultural Department, Secretary Morton says there is reason to doubt whether the consumption of wheat for food during the past year has been as great as $4\frac{3}{4}$ bushels per capita. It is high time to doubt these figures. Not on the ground of greater economies alone. The diet of the American people is becoming more varied every year, and largely at the expense of wheat bread. The average American probably eats as much as he ever did, but he eats a greater number of articles, including fruits and vegetables during some seasons of the year, when formerly they were unobtainable. The department should abolish $4\frac{3}{4}$ bushels per capita as a basis of reckoning consumption.

ACCORDING to the May report of the Bureau of Statistics breadstuffs to the value of \$11,973,575 were exported during April, as compared with \$13,026,267 exported in April, 1893; and for the ten months ending April 30 \$143,256,115 were exported, against \$163,130,250 for the same time in 1892-93. There were 78,616,561 bushels of wheat, valued at \$53,283,193, exported during the ten months ending April 30, against 97,148,074 bushels, valued at \$78,005,885, exported during the same time of the preceding crop year. For the ten months ending April 30 230,658 bushels of rye were exported, against 1,171,283 bushels during the same time a year ago. For the ten months ending April 30 5,582,330 bushels of oats, 230,658 of rye, 57,001,530 of corn, and 4,704,747 of barley were exported, against 891,037 bush-

els of oats, 1,171,283 of rye, 34,695,227 of corn, and 2,394,464 of barley exported during the same period of 1892-93.

IN Queries and Replies, this number, we publish a query from a Nebraska shipper regarding the shipper's liability for the freight on grain consigned to a St. Louis firm. The carrier's attempt to collect from consignees shows that it looked to them for the payment of freight and had they remained solvent it would no doubt have sued them for it. As the shipper did not sign the bill of lading over to the consignee it may be that the upper courts will hold him liable for the freight. It is a complicated affair and if any reader knows of a similar case he will confer a favor by informing us of it.

FROM Clapp & Co., bankers and brokers, Mills Building, New York, we have received a "Souvenir of 1893" which is indeed a valuable addition to compact statistical information. In addition to the daily record of values of stocks, cotton and grain, for 1893, it contains views and data respecting a score or more of the exchanges of country, records relating to monetary system, commerce, navigation, etc., of the country, bank clearings of New York banks, with a vast amount of other information valuable to the grain dealer, capitalist and stock raiser. It is a very full and creditable work which every recipient will value.

WHEAT thieves at Minnesota grain centers have given so much trouble that a persistent effort is being made by the receivers, inspectors and carriers to stop all pilfering from loaded cars. Every grain center is cursed with thieves who not only extract grain, but when they have secured all they can carry they leave the car open to the rain, snow and sleet, and often more is thrown out in switching than the thieves take. Carriers should guard their yards more vigilantly and deal severely with every thief caught. If carriers were compelled to deliver every cental of grain received at destination or make good the loss, as they should do, no trouble would be experienced with grain thieves.

SPECIAL attention is called to the advertisement of the Sykes Steel Roofing Company, which appears in the present issue of this paper. This is one of the most successful and reliable firms in this line of business, and has grown from a very modest beginning in 1879 to its present large plants, both at Chicago and Niles, Ohio. They own the buildings they occupy, their plant in this city being located at the corner of Morgan and Rebecca streets, where they are connected by a switch with the C. & N. W. Ry., thus being enabled to load and unload their cars with the least possible trouble and expense. They inform us that it required about 150 tons of sheet iron and steel to fill the orders received at both their works during the last week of April. Any of our readers needing goods in this line should write them for their catalogue and prices. Their hundreds of customers are a sufficient guarantee of the quality of the work which they turn out.

JOHN FLEMING, who was the chief engineer of the notorious "Fund W" a dozen years ago, died in this city on May 5. Fleming was the head of the firm of Fleming & Merriam, the ostensible managers of "Fund W." As a matter of fact, no such person as Merriam was ever known. Fleming was managing a big bucket shop in Chicago when the idea of working a huge bunko game on the gullible public either occurred to him or was suggested by some of his companions. How many were engaged in the scheme or how much they made have always been matters of conjecture. The day the post-office officials pounced upon them \$14,000 were found in that day's mail. The victims were gathered up from Maine to California. The

"Fund W" fellows were shrewd and extensive advertisers. The AMERICAN ELEVATOR AND GRAIN TRADE was one of the few papers that refused absolutely to advertise this scheme, that on its very face smacked of fraud.

THE WATER ROUTE FOR EXPORT GRAIN.

The amount of grain for export transported via the great lakes is increasing annually and the carrying capacity of the lake marine is also increasing rapidly. Rates and the value of grain seem to be the only thing on the decline. The Erie route from the lakes to the seaboard is at a standstill and the St. Lawrence route is growing in favor.

Between the politicians and the railroad elevator pool the improvement of the Erie Canal channel is prevented and the charges for transferring the grain at Buffalo and at New York City are kept so high as to make the cost of sending grain that way over 30 per cent. higher than it should be.

The Erie Canal through the influence of these pernicious meddlers was kept closed three weeks longer than was necessary this spring, and canal boats were kept in idleness while the rail rates were maintained. At the same time the railroad-elevator pool, in league with the shovelers, attempted to advance the price of shoveling and to do away with the steam shovels. The extra expense would be absorbed in the lake and rail rate and would appear only in the lake and canal shipments, the same as the present unjust and unlawful charge for transferring. It was a very shrewd move to turn grain to rail carriers' vessels and lines, but it was nipped in the bud by the lake vesselmen threatening to take grain to Oswego. This brought the pool managers to their senses, and the shovelers were put back and the rate reduced.

On the other hand, every effort is being made to improve the St. Lawrence route and the facilities for handling grain in transit. When the trade is all going that way, New York state may awaken to the enormity of its error.

FARMERS' TRICKS IN HAY.

It is said that farmers will do anything for the sake of making a little extra money; but of course this is not true of the great majority of the tillers of the soil. It is too true an axiom, however, with far too many, and it seems that the number of tricks farmers have played in the past, notwithstanding their re-



peated exposures in the columns of the press, is no warning to them. Last week baled hay was received in this city, says the Montreal Trade Bulletin, with heavy stones embedded in the middle, and in one instance a dead calf was taken from the middle of a bale, that had been crushed to a jelly by pressing. Anything, it seems, would be resorted to by some farmers in order to increase the weight of their hay and squeeze more money out of purchases than they are entitled to.

Trade Notes.

Where will advertising pay? In a paper that is in touch with the people who can use your goods.

"Well, how do you find business?" asked the hard times man of his rival. "I advertise for it," was the brisk reply.

You can't get fat on one meal, and you can't get rich on one advertisement. By keeping everlastingly at it you will win.

W. T. Ellston, Springfield, Mo., is now assistant agent for Missouri, Arkansas and Texas of the Barnard & Leas Manufacturing Company of Moline, Ill.

The merchant who advertises judiciously is able to whistle during hard times. The creditors of the other kind of merchant can also whistle; they generally have to.

The Weber Gas and Gasoline Engine Company of Kansas City, Mo., writes us: "We are pleased to say our business is very good, indeed. We are well booked with orders."

Nordyke & Marmon Co., Indianapolis, Ind., manufacturers of feed mills and elevator and mill supplies, were visited by a cyclone quite recently. Their works were but slightly damaged.

Benson & Brannon of Miami City, Ohio, manufacturers of the Little Bonanza Fanning Mill and Grain Separator, will probably locate a factory in Iowa. They have works in Indiana, Ohio and Illinois.

Huntley, Cranson & Hammond, Silver Creek, N. Y., manufacturers of elevator machinery, have added a new machine to their many manufactures. "Our trade is fair," they write; "it could be a good deal better and still much worse. We think we are getting our full share."

The advertising pages of this issue contain an illustration of the Raymond Gas Engine for natural and artificial gas, gasoline, etc., manufactured by F. M. Hicks & Co. of Chicago. Many excellent points are claimed for this engine, a full description of which will appear in a subsequent number.

The Johnson & Field Company of Racine, Wis., manufacturers of all kinds of elevator machinery and supplies, have issued a new illustrated catalogue, the contents of which bear testimony to the company's knowledge of the requirements of the modern elevator. Copies will be sent upon application.

The Charter Gas Engine Company writes us: "We are pleased to report very favorable business for this season of the year and the hard times. Our sales have reached into the following states, besides those that are contiguous, in the last two weeks: Vermont, Rhode Island, Arkansas, Maryland, Ohio, Mississippi, West Virginia and Texas."

The increasing demand for the Automatic Grain Scale, manufactured by the Chicago Automatic Scale Company, is very satisfactory to the manager of the company, Mr. Alex. Stewart. Since the commencement of the present year the sales of each month have been largely in excess of that of the month preceding. This steady increase in the number of orders received attests the popularity to which the scale has attained.

Our readers will notice that this issue contains the advertisement of the Jeffrey Manufacturing Company, Columbus, Ohio, and should be read by every person having use for elevating and conveying machinery of any description. This firm is one of the foremost in the country in the manufacture of their class of machinery, and they have a large line of chain belting and specialties from which purchasers may select.

Bags and bagging valued at \$799,483 were imported during the nine months ending with March, against an amount valued at \$984,877 imported during the nine months ending with March, 1893. Burlaps (except for bagging for cotton) valued at \$3,212,526 were imported during the nine months ending with March, against an amount valued at \$4,380,519 imported during the corresponding months ending with March, 1893. Of imported bags and bagging an amount valued at \$20,864 was exported during the nine months

ending with March, against an amount valued at \$61,658 exported during the corresponding months preceding. Of imported burlaps (except for bagging for cotton) an amount valued at \$928 was exported during the nine months ending with March, against an amount valued at \$62,571 exported during the nine months ending with March preceding.

The Hicks Gas Engine Company, Cleveland, Ohio, writes us as follows: "Since putting our advertisement in your AMERICAN ELEVATOR AND GRAIN TRADE we have had inquiries for our gas and gasoline engines from all over the United States, and have taken a good many orders from the inquirers. Our business is increasing in spite of the hard times. We think the AMERICAN ELEVATOR AND GRAIN TRADE is as good a medium as is published to place a gas and gasoline engine before the purchasers."

The Chase Elevator Company, whose advertisement appears in this number, are prepared to furnish working plans for grain elevators of any capacity at small cost. If you want an elevator that will fall down and spill grain all over street and tracks trust everything to your local barn builders. If you want a house that will stand, get working plans from professional elevator architects, who have made a study of the strains an elevator is subjected to, who know how to economize in building material, in power, in space and in first cost.

The commission firm of S. W. Edwards & Son, with main office and warehouse located on the Chicago, Milwaukee & St. Paul and the Chicago, Cincinnati & St. Louis railroads at 373-375 Carroll avenue, Chicago, report an excellent business. They have ample facilities for handling and disposing of consignments to the best advantage. Ten teams are regularly employed, with 14 men, including two salesmen. Their receiving business includes grain, hay, straw and mill feed, while special attention is paid to the three latter commodities. The capacity of their warehouse is 20,000 bushels of grain and 100 tons of hay and straw. The firm consists of S. T. Edwards, F. W. Edwards and E. J. Loomis. Each member has had years of experience in this line of business.

Mr. H. L. Knight and the Adams Brothers have bought out the entire interest of the Pease estate in the E. H. Pease Manufacturing Company of Racine, Wis., and will continue the business without any alterations in the name of the company or its managing officers, except that Mr. H. L. Knight now becomes one of the official managers of the company along with W. G. and C. H. Adams. Mr. W. G. Adams has been president of the company over seven years. At the death of E. H. Pease, in January, 1890, Mr. C. H. Adams became its secretary and treasurer, and about the same time Mr. K. L. Knight became its superintendent. The company has a fine plant located at Racine, Wis., with shipping facilities on a par with Chicago or Milwaukee, both for "in" or "out" freight rates, and are in a sound financial condition. They have a reputation as cash buyers in all lines and are thereby in the best of position to serve their patrons in all the details of their business. On May 1 the company opened a branch house at No. 6 Corn Exchange, Minneapolis, Minn., with Mr. C. A. Patterson of Minneapolis as manager thereof, for their growing trade throughout the Northwest. Mr. Patterson has long been a resident of Minneapolis, and is well and favorably known by the trade in the particular line he represents there. It is safe to say that few companies in the same line enjoy a more advantageous position in these days than the E. H. Pease Manufacturing Company. Their reputation as makers and furnishers of mill and grain elevator machinery and supplies is second to no other similar company, and the grain machinery of their own special manufacture stands at the very top. They have recently secured the sole general agency of the Pierce Gasoline Engines, shown on the inside rear cover page of this number of the AMERICAN ELEVATOR AND GRAIN TRADE. This engine has now been on the market about two years. It is a high grade machine and is meeting with splendid sales.

A Mason County (Kentucky) farmer managed to make a net profit of \$2,400 on 40 acres of cultivated land last year. He put in a diversified crop and worked it in an intelligent manner.

RANGE OF PRICES AT CHICAGO.

The daily range of prices for cash grain at Chicago since April 15 has been as follows:

April.	No. 2 RED W. WHT.		No. 2 SFG WHEAT.		No. 2 CORN.		No. 2 OATS.		No. 2 RYE.		No. 3 BARLEY.		No. 1 FLAXSEED.	
	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High.
16...	59 1/2	60	58 1/2	60	38 1/2	39	32 1/2	33 1/2	50	51	53	56	130	130
17...	60	60	59 1/2	60 1/2	39 1/2	39 1/2	33 1/2	33 1/2	50	50	52	58	130	130
18...	59 1/2	60	59 1/2	60 1/2	39 1/2	39 1/2	32 1/2	32 1/2	50	50	52	58	128	128
19...	59 1/2	60	59 1/2	60 1/2	39 1/2	39 1/2	32 1/2	32 1/2	50	50	52	58	126	126
20...	59 1/2	60	59 1/2	60 1/2	39 1/2	39 1/2	32 1/2	32 1/2	50	50	52	58	121	121
21...	59 1/2	60	59 1/2	60 1/2	39 1/2	39 1/2	32 1/2	32 1/2	50	50	52	58	120	120
22...	59 1/2	60	59 1/2	60 1/2	39 1/2	39 1/2	32 1/2	32 1/2	50	50	52	58	120	120
23...	59 1/2	60	59 1/2	60 1/2	39 1/2	39 1/2	32 1/2	32 1/2	50	50	52	58	120	120
24...	59 1/2	60	59 1/2	60 1/2	39 1/2	39 1/2	32 1/2	32 1/2	50	50	52	58	120	120
25...	59 1/2	60	59 1/2	60 1/2	39 1/2	39 1/2	32 1/2	32 1/2	50	50	52	58	120	120
26...	59 1/2	60	59 1/2	60 1/2	39 1/2	39 1/2	32 1/2	32 1/2	50	50	52	58	120	120
27...	59 1/2	60	59 1/2	60 1/2	39 1/2	39 1/2	32 1/2	32 1/2	50	50	52	58	120	120
28...	59 1/2	60	59 1/2	60 1/2	39 1/2	39 1/2	32 1/2	32 1/2	50	50	52	58	120	120
29...	59 1/2	60	59 1/2	60 1/2	39 1/2	39 1/2	32 1/2	32 1/2	50	50	52	58	120	120
30...	59 1/2	60	59 1/2	60 1/2	39 1/2	39 1/2	32 1/2	32 1/2	50	50	52	58	120	120
1...	58 1/2	59	57 1/2	58 1/2	38 1/2	39	32 1/2	33 1/2	46	46	48	51	124	124
2...	58 1/2	59	57 1/2	58 1/2	38 1/2	39	32 1/2	33 1/2	46	46	48	51	125	125
3...	58 1/2	59	57 1/2	58 1/2	38 1/2	39	32 1/2	33 1/2	46	46	48	51	125	125
4...	58 1/2	59	57 1/2	58 1/2	38 1/2	39	32 1/2	33 1/2	46	46	48	51	125	125
5...	58 1/2	59	57 1/2	58 1/2	38 1/2	39	32 1/2	33 1/2	46	46	48	51	125	125
6...	58 1/2	59	57 1/2	58 1/2	38 1/2	39	32 1/2	33 1/2	46	46	48	51	125	125
7...	58 1/2	59	57 1/2	58 1/2	38 1/2	39	32 1/2	33 1/2	46	46	48	51	125	125
8...	58 1/2	59	57 1/2	58 1/2	38 1/2	39	32 1/2	33 1/2	46	46	48	51	125	125
9...	58 1/2	59	57 1/2	58 1/2	38 1/2	39	32 1/2	33 1/2	46	46	48	51	125	125
10...	58 1/2	59	57 1/2	58 1/2	38 1/2	39	32 1/2	33 1/2	46	46	48	51	125	125
11...	58 1/2	59	57 1/2	58 1/2	38 1/2	39	32 1/2	33 1/2	46	46	48	51	125	125
12...	58 1/2	59	57 1/2	58 1/2	38 1/2	39	32 1/2	33 1/2	46	46	48	51	125	125
13...	58 1/2	59	57 1/2	58 1/2	38 1/2	39	32 1/2	33 1/2	46	46	48	51	125	125
14...	58 1/2	59	57 1/2	58 1/2	38 1/2	39	32 1/2	33 1/2	46	46	48	51	125	125
15...	58 1/2	59	57 1/2	58 1/2	38 1/2	39	32 1/2	33 1/2	46	46	48	51	125	125

For the week ending April 21 prime contract timothy sold at \$4.15@4.30 per cental; prime contract clover at \$3.75@4.10; Hungarian at \$1.25@2.05; German millet at \$0.80@1.25; buckwheat at \$1.00@1.45 per 100 pounds. No. 1 flax on track sold at \$1.13@1.30. The receipts of hay for the week were 3,781 tons, against 6,173 tons for the previous week. The shipments for the week were 709 tons, against 1,045 tons for the previous week. Local demand was good throughout the week, and all choice grades met with a ready sale. Prices advanced from 50 cents to \$1 per ton. Coarse and off color hay was dull. Sales of No. 1 timothy ranged at \$10.00@11.50 for fair to fancy, No. 2, \$8.50@10.00; mixed, \$7.50@9.50; not graded, \$5.00 for damaged, and \$3.00@10.00 for fair to good; Illinois upland prairie, \$6.00; Kansas, \$8.25; Dakota, \$6.50@7.50; Iowa, \$5.00@6.50 for off color, and \$7.00@8.50 for fair to good, and \$3.75@9.50 for choice to fancy. Wheat straw sold at \$5.50@6.00; oat straw at \$4.50@6.00, and rye straw at \$8.00.

For the week ending April 28 prime contract timothy sold at \$3.90@4.30 per cental; prime contract clover at \$9.40@10.00; Hungarian at \$1.25@2.05; German millet at \$0.80@1.25; buckwheat at \$1.10@1.45 per 100 pounds. No. 1 flax on track sold at \$1.12@1.23. The receipts of hay for the week were 5,372 tons, against 3,781 tons the previous week. The shipments for the week were 568 tons, against 709 tons for the previous week. Offerings were moderate and local demand fair. Prices declined \$0.50@1.00 for timothy, and about \$0.50 per ton for upland prairie. Sales of No. 1 timothy ranged at \$9.50@11.25 for good to fancy—outside prices early in the week; No. 2, \$8.25@10.00; mixed, \$7.00@8.50; not graded, \$8.75@10.50; Illinois upland prairie, \$5.75@6.50; Indiana, \$5.50; Iowa, \$7.00 for coarse and damaged, \$7.50@9.50 for good to fancy; No. 1 prairie, \$5.75; packing hay, \$4.25@4.50. Wheat straw sold at \$6.00@6.50; oat straw at \$5.50@6.50, and rye straw at \$8.50@9.50.

For the week ending May 5 prime contract timothy sold at \$3.95@4.25 per cental; prime contract clover at \$9.25@11.50; Hungarian at \$1.25@2.05; German millet at \$0.80@1.25; buckwheat at \$1.10@1.45 per 100 pounds. No. 1 flax on track sold at \$1.09@1.29. The receipts of hay for the week were 6,876 tons, against 5,372 tons the previous week. The shipments for the week were 847 tons, against 568 tons for the previous week. During the early part of the week the market ruled dull, toward the close the demand improved and a steady feeling prevailed. Sales of No. 1 timothy ranged at \$9.00@10.75 for fair to fancy; No. 2, \$8.00@9.25; mixed, \$6.00@9.00; not graded, \$8.50@9.50; threshed, \$6.00; clover hay, \$7.00; Illinois upland prairie, \$6.00@6.50; Indiana, \$6.00@6.50; Iowa, \$5.50@6.00 for heating, and \$6.50@9.25 for fair to fancy; packing hay, \$4.00@4.25. Wheat straw sold at \$5.00@6.50; oat straw at \$5.50@6.00, and rye straw at \$8.50@9.50.

For the week ending May 12 prime contract timothy sold at \$3.90@4.25 per cental; prime contract clover at \$9.00@12.00; Hungarian at \$1.25@2.00; German millet at \$0.80@1.25; buckwheat at \$1.00@1.70 per 100 pounds. The receipts of hay for the week were 3,925 tons, against 8,876 tons the previous week. The shipments for the week were 780 tons, against 847 tons the previous week. Only a moderate business was transacted during the week. The arrivals were small and the demand light. Prices improved during the close of the week. Sales of No. 1 timothy ranged at \$9.00@11.00 for fair to fancy; No. 2, \$8.00@9.50; mixed, \$7.00@8.00; not graded, \$5.00 for damaged and \$7.00@9.50 for fair to good; Indiana upland prairie, \$6.00@7.00; Wisconsin, \$6.50; Iowa, \$5.00@6.00 for heating, and \$7.00@9.75 for fair to fancy. Wheat straw sold at \$5.50@6.50, oat straw at \$5.50, and rye straw \$7.00@9.50 for poor to choice.

RECEIPTS AND SHIPMENTS AT CHICAGO.

The following table, compiled by George F. Stone, secretary of the Board of Trade, shows the receipts and shipments at Chicago during April, 1894 and 1893, of seeds, hay and broom corn:

Repts.	Timothy lbs.	Clover lbs.	Other grass seeds, lbs.	Flax-seed, bu.	Broom corn, lbs.	Hay, tons.
1894 ..	1,717,641	970,943	418,657	207,826	980,474	22,855
1893 ..	1,689,237	626,542	644,510	238,594	1,287,370	19,067
Shipts.						
1894 ..	6,281,324	1,444,699	1,420,380	62,296	762,140	3,243
1893 ..	5,018,191	871,800	706,948	711,585	1,621,541	4,051

RECEIPTS AND SHIPMENTS AT ST. LOUIS.

The receipts and shipments of grain and hay at St. Louis, Mo., during the month ending April 30, as compared with the same period of the preceding year, were, according to Geo. H. Morgan, secretary of the Merchants' Exchange, as follows:

Articles.	Receipts.		Shipments.	
	1894.	1893.	1894.	1893.
Wheat, bushels.....	178,750	230,100	599,610	599,003
Corn, bushels.....	2,760,600	2,278,800	2,705,179	3,097,735
Oats, bushels.....	815,100	647,900	379,527	273,833
Barley, bushels.....	35,250	18,000	2,873	11,927
Rye, bushels.....	8,400	56,700	4,954	81,006
Hay, tons.....	15,720	9,639	5,734	2,188
Flour, barrels.....	113,475	107,552	190,154	154,807

DESTINATION OF AMERICAN WHEAT EXPORTS.

The last report of the Bureau of Statistics shows that the destination of the wheat exported from the United States was as follows:

	Month ending March 31.		Nine months ending March 31.	
	1894.	1893.	1894.	1893.
United Kingdom.....	3,902,103	3,945,157	42,857,601	60,770,295
Germany.....	88,090	267,908	1,258,118	2,273,990
France.....	259,184	950,272	8,093,116	4,844,071
Other countries in Europe....	2,269,842	1,901,085	18,980,135	19,559,047
Brit. North Am. Possessions....	6,112	1,274	2,661,172	2,693,943
Cent. Am. states & Brit. Hond	4,645	1,399	30,276	36,549
West Indies and Bermuda....	3,017	5,847	11,494	10,505
Brazil.....	.....	6	47	63,925
Other countries S. America....	553	500	3,533	8,233
Asia & Oceania.....	1,370	1,043	8,589	13,623
Africa.....	.....	75,000	85,879	317,746
Other countries.....	902	1,000	4,912	9,077
Total.....	6,535,818	7,150,491	73,994,872	90,601,004

DESTINATION OF AMERICAN CORN EXPORTS.

The last report of the Bureau of Statistics shows the destination of the corn exported from this country to be as follows:

	Month ending March 31.		Nine months ending March 31.	
	1894. Bu.	1893. Bu.	1894. Bu.	1893. Bu.
United Kingdom.....	2,425,347	1,911,020	20,712,157	12,945,585
Germany.....	2,177,889	429,776	9,524,718	3,491,714
France.....	419,821	386,213	2,103,224	830,212
Other countries in Europe....	1,676,834	521,471	9,136,779	4,443,424
British North Am. Possessions....	152,345	182,315	7,921,956	2,462,717
Mexico.....	23,300	199,938	380,605	5,496,366
Cent. Am. States & Brit. Hond's	21,385	10,600	156,766	47,936
Cuba.....	50,620	64,308	783,283	732,868
Puerto Rico.....	620	4,500	6,659	15,844
Santo Domingo.....	258	.....	599	5,346
Other West Indies and Bermuda ..	75,156	51,286	472,266	406,349
South America.....	6,935	79,808	112,915	332,277
Other countries.....	1,623	8,754	17,315	17,615
Total.....	7,081,893	3,849,889	51,329,242	31,228,253

RECEIPTS AND SHIPMENTS AT SAN FRANCISCO.

The receipts and shipments of grain and hay at San Francisco during the month ending April 30, as compared with the same period of the preceding year, were, according to T. C. Friedlander, secretary of the Produce Exchange, as follows:

Articles.	Receipts.		Shipments.	
	1894.	1893.	1894.	1893.
Wheat, centals.....	768,577	555,103	cs. 632,183	534,882
Corn, ".....	47,549	28,340	" 33,952	9,345
Oats, ".....	25,021	24,546	" 1,139	1,083
Barley, ".....	89,667	195,166	" 151,818	122,492
Rye, ".....	3,636	39,222	.....	.....
Hay, tons.....	9,629	10,183	.....	.....
Flour, 1/4 bbls.....	372,694	320,529	bbls. 66,768	84,383

RECEIPTS AND SHIPMENTS AT MINNEAPOLIS.

The receipts and shipments of grain and hay at Minneapolis, Minn., during the 4 weeks ending April 28, as compared with the same period of the preceding year, were, according to G. D. Rogers, secretary of the Chamber of Commerce, as follows:

Articles.	Receipts.		Shipments.	
	1894.	1893.	1894.	1893.
Wheat, bushels.....	2,951,200	4,464,780	574,640	2,243,640
Corn, bushels.....	127,910	37,750	121,590	9,380
Oats, bushels.....	234,550	143,540	118,160	141,520
Barley, bushels.....	12,180	40,190	10,740	88,650
Rye, bushels.....	6,140	10,940	32,560	10,630
Flaxseed, bushels.....	500	51,900	19,260	60,040
Hay, tons.....	2,210	1,647	60	45
Flour, barrels.....	7,355	31,974	728,573	643,231

RECEIPTS AND SHIPMENTS AT DETROIT.

The receipts and shipments of grain and hay at Detroit, Mich., during the 4 weeks ending April 28, as compared with the same period of the preceding year, were, according to Geo. M. Lane, secretary of the Board of Trade, as follows:

Articles.	Receipts.		Shipments.	
	1894.	1893.	1894.	1893.
Wheat, bushels.....	503,410	320,895	1,047,025	991,739
Corn, bushels.....	105,175	96,748	39,232	96,120
Oats, bushels.....	130,297	202,838	10,149	6,980
Barley, bushels.....	51,798	61,194	.....	21,001
Rye, bushels.....	1,647	5,283	2,067	5,667
Hay, tons.....	780	.....	80	.....
Flour, barrels.....	10,790	13,916	6,342	7,391

RECEIPTS AND SHIPMENTS AT TOLEDO.

The receipts and shipments of grain and hay at Toledo, O., during the four weeks ending April 28, as compared with the same period of the preceding year, were, according to Denison B. Smith, secretary of the Produce Exchange, as follows:

Articles.	Receipts.		Shipments.	
	1894.	1893.	1894.	1893.
Wheat, bushels.....	673,700	361,200	807,300	553,600
Corn, bushels.....	344,200	430,300	1,320,000	1,888,300
Oats, bushels.....	4,700	31,600	7,400	6,000
Barley, bushels.....	3,000	400	3,410	1,000
Rye, bushels.....	4,100	7,500	10,100	6,000
Clover seed, pounds...	37,335	26,970	150,240	125,400
Flour, barrels.....	8,407	5,601	65,342	46,028

VISIBLE SUPPLY OF GRAIN.

The following table shows the visible supply of grain Saturday, May 12, 1894, as compiled by George F. Stone, secretary of the Chicago Board of Trade:

In Store at	Wheat, bu.	Corn, bu.	Oats, bu.	Rye, bu.	Barley, bu.
Albany		35,000	60,000		
Baltimore	545,000	237,000	50,000	14,000	
Boston	269,000	123,000	5,000		
Buffalo	2,153,000	785,000	47,000	41,000	16,000
do afloat					
Chicago	19,475,000	4,121,000	956,000	173,000	
do afloat					
Cincinnati	7,000	9,000			2,000
Detroit	1,821,000	23,000	5,000	1,000	2,000
do afloat					
Duluth	9,309,000	223,000		23,000	
do afloat					
Indianapolis	141,000	29,000	4,000		
Kansas City	317,000	7,000	25,000	10,000	
Milwaukee	994,000	3,000		7,000	10,000
do afloat					
Minneapolis	10,448,000	40,000	6,000	2,000	3,000
Montreal	661,000	12,000	232,000	39,000	32,000
New York	7,742,000	291,000	583,000	18,000	
do afloat					
Oswego	64,000	30,000			29,000
Peoria	107,000	55,000	59,000	1,000	2,000
Philadelphia	540,000	620,000	63,000		
St. Louis	2,802,000	130,000	9,000		
do afloat					
Toledo	2,556,000	96,000		2,000	
do afloat					
Toronto	102,000		49,000		8,000
On Canals	1,803,000	1,202,000	399,000		
On Lakes	1,624,000	805,000		8,000	
On Miss. River	10,000	44,000	13,000		
Grand total	63,510,000	8,920,000	2,575,000	339,000	188,000
Corresponding date, 1893	72,692,000	7,829,000	3,527,000	608,000	552,000

INSPECTED RECEIPTS AT CHICAGO.

According to the report of Chief Grain Inspector George P. Bunker the grain received at Chicago during the month of April, 1894, was graded as follows:

WINTER WHEAT.

Railroad.	White.			Hard.			Red.			No Grade.
	2	3	4	1	2	3	1	2	3	
C. B. & Q.	1	2		41	14		23	72	9	5
C. R. I. & P.				3	2		4	7	3	1
C. & A.				13	2		1	44	2	
Illinois Central				6	6		17	55	12	1
Freeport Div.							2	3		
Galena Div. N. W.									1	
Wis. Div. N. W.	1			1			24	6	2	
Wabash							42	68	8	2
C. & E. I.							1	9	33	4
C. M. & St. P.	2						8	17		
Wis. Cent.										
C. Gr. Western							37		1	15
A. T. & S. Fe.				24	16		5	81	7	3
Through & Spec.				20	12		676	201	4	
Total each grade	4	2		108	92		811	588	68	12
Total W. wheat										1,691

SPRING WHEAT.

Railroad.	Northern.			No Grade.	White.			Mixed.
	2	3	4		2	3	2	
C. B. & Q.		10	7	2	1			
C. R. I. & P.		1	3					
C. & A.								
Illinois Central								
Freeport Div.		1						
Galena Div. N. W.			27	8				
Wis. Div. N. W.								
Wabash		1						
C. & E. I.								
C. M. & St. P.		1	29	3	1			
Wis. Cent.								
C. Gr. Western				2				
A. T. & S. Fe.								
Through & Spec.		124	2					
Total each grade		138	68	15	2			
Total sp. wheat								223

CORN.

Railroad.	Yellow.		White.		2	3	4	No Grade.
	2	3	2	3				
C. B. & Q.	100	171	82	24	222	257	9	
C. R. I. & P.	145	136	15	5	227	482	17	
C. & A.	102	71	20	15	98	94	7	
Illinois Cent.	79	229	51	74	33	106	13	
Freeport Div.	59	82	1	10	105	73	3	
Gal. Div. N. W.	56	227	1	11	53	243	14	
Wis. Div. N. W.						4		
Wabash	87	163	30	87	10	79	5	
C. & E. I.	9	23	4	4	7	21	1	
C. M. & St. P.	32	134		2	112	513	3	
Wis. Cent.								
C. Gr. Western	7	18	1		11	24	1	
A. T. & S. Fe.	8	68	1	14	89	68	6	
Th'gh & Spcl	47	166	1	21	33	162	2	
Total each grd	731	1,498	207	267	1,000	2,126	80	1
Total corn								5,910

OATS.

Railroad.	White.			2	3	White Clipped.		No Grade.
	1	2	3			1	2	
C. B. & Q.	1	498	205	160	55			
C. R. I. & P.		229	321	36	46			5
C. & A.		148	8	82	7			1
Illinois Central		64	18	80	8			
Freeport Div.		91	85	26	22			5
Galena Div. N. W.		141	418	50	71			2
Wis. Div. N. W.		66	141	4	10			
Wabash		177	13	53	6			2
C. & E. I.		22	5	19	1			
C. M. & St. P.		299	442	72	58			1
Wisconsin Central		9	5	1	1			
C. G. Western		67	78	26	22	1		
A. T. & S. Fe.		146	84	155	10			2
Through & Special		106	44	59	21			
Total each grade	1	2,063	1,867	823	338	1		18
Total oats								5,111

RYE.

Railroad.	1	2	3	No Grade.
C. B. & Q.			14	4
C. R. I. & P.			5	
C. & A.			1	
Illinois Central				1
Freeport Div.			6	
Galena Div. N. W.			6	2
Wisconsin Div. N. W.			16	2
Wabash				
C. & E. I.				
C. M. & St. P.			47	9
Wisconsin Central				
C. G. Western			11	2
A. T. & S. Fe.			1	
Through & Special			3	1
Total each grade			110	21
Total rye				131

BARLEY.

Railroad.	Bay Brewing.		Chevalier.		No Grade.	Total No. Cars all grain by Roads.
	2	3	2	3		
C. B. & Q.		10		28	3	2,082
C. R. I. & P.				22	11	1,730
C. & A.						716
Illinois Central						852
Freeport Div.		1		19	11	608
Galena Div. N. W.				17	5	1,358
Wis. Div. N. W.		5		61	21	378
Wabash						840
C. & E. I.		1				169
C. M. & St. P.		4		168	40	2,021
Wisconsin Central				4	1	21
C. G. Western				30	20	379
A. T. & S. Fe.				2	1	793
Through & Spec.						1,706
Total each grade	21	351	113	45	7	13,604
Total barley						538

EXPORTS FROM ATLANTIC PORTS.

The exports of breadstuffs, as compiled by George F. Stone, secretary of the Chicago Board of Trade, from the Atlantic ports during the two weeks ending May 12, as compared with same weeks last year, have been as follows:

	For the week ending May 12.		For the week ending May 13.		For the week ending May 5.		For the week ending May 6.	
	1894.	1893.	1894.	1893.	1894.	1893.	1894.	1893.
Wheat, bu.	1,033,000	1,827,000	1,438,000	1,674,000				
Corn	920,000	976,000	766,000	1,059,000				
Oats	10,000	332,000	23,000	240,000				
Rye		61,000		16,000				
Flour, bbls.	297,000	241,000	375,000	208,000				

RECEIPTS AND SHIPMENTS AT DULUTH.

The receipts and shipments of grain and hay at Duluth, Minn., during the month of April, as compared with the same period of the preceding year, were, according to Frank E. Wyman, secretary of the Board of Trade, as follows:

Articles.	Receipts.		Shipments.	
	1894.	1893.	1894.	1893.
Wheat, bushels	1,061,714	623,410	942,965	36,364
Corn, bushels				
Oats, bushels	2,134		4,741	
Barley, bushels				
Rye, bushels		675		
Flaxseed, bushels				
Flour rec'd, bbls.	250,957	137,859	142,443	144,745
Flour produced	148,889	141,941		

RECEIPTS AND SHIPMENTS AT PEORIA.

The receipts and shipments of grain and hay at Peoria, Ill., during the 4 weeks ending April 28, as compared with the same period of the preceding year, were, according to R. C. Grier, secretary of the Board of Trade, as follows:

Articles.	Receipts.		Shipments.	
	1894.	1893.	1894.	1893.
Wheat, bushels	33,600	54,600	14,400	32,600
Corn, bushels	1,288,760	722,750	406,350	228,200
Oats, bushels	1,513,600	1,394,800	1,563,100	1,469,700
Barley, bushels	59,300	44,100	35,700	23,200
Rye, bushels	21,000	12,600	9,600	6,000
Mill Feed, tons	615	192	5,096	3,080
Hay, tons	1,890	3,610	1,670	640
Flour, barrels	18,850	17,400	18,900	15,646
Spirits & Liquors, bbls.	2,850	110	15,085	17,400
Syrup & Glucose, bbls.	1,100	650	35,591	20,056

WHEAT RECEIPTS AT PRIMARY MARKETS.

The wheat receipts at nine primary markets during the 45 weeks ending May 5, for the three last years, were as follows:

	1893-94.	1892-93.	1891-92.
St. Louis	11,890,000	24,952,000	25,189,000
Toledo	11,981,000	21,551,000	18,730,000
Detroit	8,188,000	7,789,000	7,003,000
Kansas City	12,377,000	25,056,000	13,512,000
Cincinnati	992,000	1,751,000	2,280,000
Winter wheat	45,428,000	81,099,000	66,765,000
Chicago	20,618,000	58,893,000	44,244,000
Milwaukee	10,055,000	13,498,000	10,984,000
Minneapolis	46,828,000	60,812,000	59,169,000
Duluth	30,405,000	35,885,000	46,455,000
Spring wheat	107,906,000	169,488,000	160,852,000
Total, 45 weeks	153,334,000	250,187,000	227,617,000

FLAXSEED AT CHICAGO.

The receipts and shipments of flaxseed at Chicago during the first 9 months of the two last crop years, as reported by S. H. Stevens, flaxseed inspector of the Board of Trade, were as follows:

Months.	Receipts.		Shipments.	
	1893-94.	1892-93.	1893-94.	1892-93.
August.....	414,700	729,300	341,606	1,009,113
September.....	1,881,550	761,750	1,195,733	974,668
October.....	2,340,800	1,452,000	1,810,110	1,150,685
November.....	1,178,650	1,395,350	887,708	1,365,880
December.....	493,900	743,050	383,932	228,060
January.....	183,700	396,550	186,674	323,261
February.....	59,400	187,550	142,645	322,555
March.....	44,000	367,950	92,050	333,257
April.....	129,464	232,650	60,423	660,506
May.....				
June.....				
July.....				
Total.....	6,726,164	6,266,150	5,100,881	6,277,985

RECOMPENSE FOR COUNTRY WAREHOUSEMEN.

Recently we have sent out the following letter of inquiry to a number of Nebraska elevator men, and have been favored with the letters which follow it:

Dear Sir:—The opinion that, since elevator men relieve railroad companies of the necessity of providing warehouses for grain and of performing the duties of a grain warehouseman, as carriers do for other classes of freight, they should receive some recompense for this service, is gaining many zealous supporters, and we would be pleased to learn your opinions on the subject.

If there was no elevator at your station what do you think would be the average time required to load each car? How much and why would the amount shipped annually be reduced? If carrier would offer you a bonus of one cent a bushel for all grain loaded out of your house, or a yearly cash bonus and ground rent free to store grain three days and load into cars free for all comers, would you accept? Why would not either arrangement facilitate and encourage shipments, and reduce the delay of cars at initial point? What disadvantages to the elevator man do you see in such an arrangement?

WOULD FACILITATE AVERAGE SHIPMENTS.

Editor American Elevator and Grain Trade:—The questions we have been asked are very important to grain shippers. There is no one who builds an elevator but who ought to have some recompense from the railroad company for storing and loading promptly. If there were no elevators at stations it would take on an average at least three or five days to load every car, and when receipts are light it would take two weeks. I would think that at least 1 or 2 cents per bushel would be a fair recompense, but no less. It certainly would facilitate an average shipment.

We would like to see this matter pushed, and will help it all that we possibly can.

Yours truly,

KNAPP & FRENCH.

Hastings, Neb.

ELEVATOR MEN SHOULD BE COMPENSATED.

Editor American Elevator and Grain Trade:—I certainly think that elevator men should receive some compensation from the railroad companies for their services. If there were no elevators at this station, for instance, the average time required to load a car would be about two days; and the amount shipped would generally be reduced considerably, as the farmers would not be able to get teams enough for delivery.

We would be willing to load grain into cars to all comers for a bonus of 1 cent per bushel. On the whole, I think it would be an advantage. We cannot see that there would be any disadvantage.

Respectfully,

NELSON & KETELS.

Bee, Neb.

MAN WITH A SCOOP PLAYING HOB.

Editor American Elevator and Grain Trade:—I think that the agitation of this question is a good idea. The man with a scoop shovel over his shoulder and a pair of rented scales has been playing hob with elevator owners. About eleven years ago the Iowa grain dealers asked and got a 2 cent per 100 reduction on account of furnishing facilities for loading grain promptly, but were obliged to discontinue, as the then railroad commissioners thought the fact of having elevators was of sufficient advantage for dealers to have.

There is good and sufficient reason for allowing a bonus to elevator men for loading grain into cars, especially if it does not come in the shape of an advance in freight rates, and I should be pleased to see the plan in successful operation.

THOMAS COCHRANE.

Lincoln, Neb.

WAREHOUSEMEN SHOULD HAVE LOWER RATES.

Editor American Elevator and Grain Trade:—I like the plan of a bonus of a cent per bushel for loading wheat out of elevator, but by the second plan you propose, if I understand it, the carrier would furnish the money to buy the grain and make the price. The elevator man would only act as agent and could have his head cut off at any time.

I do think it is a shame that the elevator man, who has \$10,000 to \$20,000 invested and lying idle six months in the year, should let the farmer or anyone else come in and ship the grain at the same rates without a dollar invested in property to help his town and schools out.

If there is any chance to carry on this movement I

am greatly in favor of it, and would be pleased to read the opinion of others on this subject.

Yours,

O. W. H.

RAILROAD MEN ACKNOWLEDGE JUSTICE OF COMPENSATION.

Editor American Elevator and Grain Trade:—As to elevator men getting a compensation for furnishing the railroad companies with elevators for handling and loading grain for shipment, I think any fair-minded man will say that in justice they should have something for the use of their money invested in this way. No one realizes the benefit a good elevator is to the railroads and to the community more than the railroad people themselves.

I have never talked to a leading railroad man on the subject who has not admitted that he thought they were a great benefit and that in justice the road should allow something. I believe that the elevator men themselves are to blame for not having something done in this matter before this. There are very few country elevators that could not handle and load out 10 to 15 cars of corn per day. Where there are no elevators it is often the case that the railroad has to hold a car more than a day for loading, and sometimes two or three days, being out the use of the cars just so much longer, besides the annoyance of having it handled by so many different parties.

I never heard a railroad man express himself on this subject who did not say that he thought the elevator man should have at least 2 cents per bushel. But I would be willing to accept a bonus of 1 cent per bushel, or a reasonable yearly cash bonus, for all grain loaded out of my houses, and in consideration of this agree to handle all grain that was offered for all comers.

I would like to hear more on this subject.

Yours truly,

O. A. COOPER.

Humboldt, Neb.

WHY ELEVATORS ARE UNPROFITABLE.

Editor American Elevator and Grain Trade:—If the carrier could give a bonus to the elevator man it would be a great help to both the carrier and the grain dealer. At present the carrier as a rule gives more than 1 cent per bushel in a roundabout way to some third party, and only a small part of what is given reaches the country dealer. Moreover, the said third party is willing to deal with anyone who can or will sell to him, and in consequence elevators are of little or no value.

The man with a scoop shovel, who is of no benefit to the railroad company as a rule, having no elevator expenses such as capital invested, taxes, insurance, etc., is enabled at times to do business for less margin than anyone owning an elevator. As it is at present it is impossible to consign grain to Chicago or any other market, pay the tariff and get commission.

All the country elevator man can do is to sell to some so-called track buyer, who has the best end of the bargain all through. The country man takes destination weights and inspection; also extreme difference in price of grade in case the grade of grain in car does not fill requirements of his sale. If the market goes down he receives no benefit; if it goes up he pays extreme difference. If he ships he gets the benefit of the drop, but not of the rise.

Taking it altogether, it is a jug-handled bargain—on one side. Until some change is made country elevators must continue to depreciate in value, and commission houses which do a receiving business continue to go out of business.

Respectfully yours,

Hastings, Neb.

WOULD BE OF ADVANTAGE TO FARMERS.

Editor American Elevator and Grain Trade:—It has always seemed to us that some recompense should be paid to those who own and operate elevators on railroads. There are always times when railroads are pushed to their capacity for cars, and at such times grain houses are of invaluable assistance to them.

If there were no elevators at this station it would take on an average at least two days to load a car. In the majority of cases it would take longer, as the farmer owning but one team could not possibly load in that time when living the average distance from the railway that he does. As to how much the amount shipped annually from this point would be reduced

if there were no elevator, we could not say. It would, however, be considerable; but then, of course, the railroad would get the grain at the point nearest to the producer.

In relation to storing and loading into cars for all comers, we take it that this would be impracticable at the average country elevator, from the fact that the houses are not of sufficient capacity to keep the grain separate. Farmers invariably object to taking the grading of the elevator man, and this would be essential for such a plan to be practicable. There are, however, points where the plan would be perfectly feasible and where the elevators are of sufficient capacity. At this point, for instance, we would be satisfied to accept 1 cent per bushel for all grain loaded out of our house.

We think it would be to the interest of the carrier to give us this recompense, and we believe that should carriers see fit to adopt this plan, men of means would be found who, for the sake of certainty, would erect elevators of sufficient storage capacity at available points and store grain for the farmer. That it would be of advantage to the latter we have no doubt, as they would have their grain where they could take immediate advantage of a sudden rise in the market, whereas at the present time they are often unable to do so.

Very truly yours,

K. M. & E. Co.

Kearney, Neb.

THREE MONUMENTS TO A SHORT-SIGHTED POLICY.

Editor American Elevator and Grain Trade:—There are three elevators and warehouses at Brock which are all closed up on account of a track buyer handling the grain at that point at a price not exceeding one-half and frequently one-quarter cent or less and loading it into cars. No grain dealer can hire a man and compete with it.

The trouble with the Missouri Pacific is that they have two particular friends who have had for years an advantage over every other person, and they send out track bids to anyone who desires them, paying as much for one car as for 10 or 100 cars. No one can compete with them, as they get a rebate of 1 cent. We do not think that Nebraska dealers are making any money, and do not believe that any can be made as long as the present system of compelling us to buy grain on track bids instead of regular markets is in force. We are so near to Kansas City that track bids are very numerous, and anybody can get them.

We think that elevator owners ought to be favored by railroad companies at least 1 cent per bushel over track buyers; but we sometimes think that track buyers get all the favors. They order cars after grain is bought, then when cars arrive arrangements are made to shell and deliver grain (corn), and it may be three or seven days, and we have known of instances where cars have remained two weeks, waiting for grain. We presume that no charges were made against the track buyer for delay.

We used to have a grain dealers' association, which worked well and was a success until a law was passed prohibiting it. But that was when all (or nearly all) grain was shipped to regular markets. We doubt very much if an association at the present time could control the trade, on account of scalpers; but an association could probably compel the roads to give them some benefits over and above the scalpers. And we could see, when scalpers got cars, that they were loaded more promptly or a charge made for delay.

We see no objections to handling grain on this plan. We are ready for almost anything that turns up. It will certainly give some relief to the trade.

SECRETARY.

On account of a change in the classification of hay shippers can again do business in the East. Hay is in the sixth class with a minimum of 20,000 pounds instead of the fifth class with a minimum of 18,000 pounds.

The Illinois State Board of Railroad and Warehouse Commissioners is considering the advisability of adopting the official classification of rates for lines in Illinois. Many complaints are being received regarding discriminations in freight rates, and the Board thinks that the adoption of the official classification would equalize matters.

SOME POSSIBILITIES IN THE GRAIN TRADE.

BY AN ELEVATOR EMPLOYEE.

Every industry, every invention, has its period of inception, growth and perfection, just as the seed that is sown. The scheme of aerial navigation was once a very nebulous notion and minds which entertained serious thoughts of its consummation were under suspicion of being but several removes from the chaotic state. To-day, however, its discussion is honored by serious minded scientists throughout the world. Our scientific magazines now recognize the probability of this long dreamed of discovery by according space to any one who seems to have evolved a new idea in this, at present, somewhat misty realm of invention. Even the much abused scheme of pneumatic shipment of grain over long distances is emerging from the list of stock jokes at the expense of enthusiastic inventors. Already it is apparent that pneumatic elevation of grain will be an old story in ten years from now, and the elevator bucket of to-day will be moss-covered.

Why then may we not hope that some method will yet be invented which will fix the weight and grade of a cargo of grain with as much certainty and with as general acceptance as the bank draft or the gold coin itself. Is it not possible that grain dealers a generation hence will, in reminiscent mood, recall the days when a man's fortune or at least his profits or loss in traffic were determined by the action of an unknown individual who, at a salary of \$60 per month, found employment in passing personal and arbitrary judgment on the quality of grain? At present the system of inspection seems to be as complete and perfect as it can be under existing methods. The trier and the tester are good so far as they go, and the rules in force are intended to be impartial and fair; yet with all these points in favor of the present system, the fate of thousands of shipments of grain hangs on the judgment of a man who practically stamps the shipment with one value or another as he sees fit.

A car of fine wheat slightly damp is inspected as number three; in two or three days the treatment it receives in the elevator fits it for storage in the number two bins, and in it goes. No one could say the inspection was unfair, yet the increased value of say 3 cents on 600 bushels is as real and tangible to somebody as if the owner of the wheat had actually added eighteen more dollars to six hundred in liquidation of an obligation for six hundred only. And very often this increase in value goes to a buyer who gives absolutely nothing for it. I have observed that the stock on hand at our elevators was a matter of considerable interest to certain buyers and that this interest increased as the stock of say rejected red wheat or damaged corn diminished. This was because wheat which had been taken in as rejected or corn as damaged and for which the shipper received the current price for the lower grade had been metamorphosed and was no longer rejected or damaged.

There seems to be no remedy for this rather unjust feature of grading unless the inspection department should adhere less rigidly to the rules in regard to damp or musty wheat. It would seem that with experience the inspector might be quite certain of the quality of the grain after it had been handled or spouted, and some allowance made to the shipper for the grade which the grain would ultimately attain. To be sure there are a number of objections to this suggestion: First, that the grain is subject to delivery before it has been in store long enough to have become fit for a higher grade. Second, to improve grain by running it over from one bin to another requires power, and power costs money. However, I think the expense in handling a slightly damp or musty car of grain cannot be more than one-fourth of the amount realized by the advance in grade; and this advance less its cost belongs, it seems to me, to the shipper.

There is, or should be, a certain intrinsic value to every shipment of grain, and perhaps the day is not far distant when our system of inspection and weighing will have been reduced to such a perfect method that this intrinsic value will be as fixed and certain as the weight and quality of the products of the silver and gold mines. And why not? Wheat is as good as gold. So is coal, iron, or any other of the staple products of the field or mine. Of all products of the mines

the value of the quality remains fixed. The owner of gold dust receives for his product the price of its intrinsic value, and this intrinsic value cannot be augmented by any process of refining or purifying. Now wheat, whether it be of one grade or another, has an intrinsic value just the same as gold, and our future methods of inspection will give to the producer the value of its intrinsic worth, which value will by these new methods be as definite and easy of determination as is the value of the product of our mines to-day. We of course do not pretend to say how this will be accomplished. I have not the slightest notion how such a state of inspection can be made practicable. But then we had no idea twenty-five years ago how the telephone or the telautograph were to be made practicable; nevertheless they are here and they have become decidedly practicable.

The trier and the tester and the nose of the inspector are to-day only wedges. In these days when every effort of the shrewd business man is bent on ferreting out vulnerable points from which profits (or otherwise) may be drawn into their pockets, the tester is becoming inadequate for determining the grade of grain by weight. Among inspectors and grain merchants and others who are posted we hear discussed various methods of filling the tester. Now with grain that has been made to order it is often a case of profits or no profits, according to the manner in which the little tester is loaded. Certain it is, that it requires experience to run a tester—a fact which it seems to me is decidedly against it. A tester, an infallible tester, should work exactly the same in one man's hands as in another's. It should be so constructed that the result should be precisely the same whether worked by the seller or buyer. To this end, why not construct a tester with an appliance attached for compressing by a certain amount of pressure, the contents of the tester, the degree of compression being shown on a gauge—the grade being established by the relative proportion of bulk to weight. This would certainly afford a fairer test than by the present method, as the result of the test would be exactly the same whether operated by seller or buyer.

A matter which needs to be "evolved" in the construction and management of elevators is a more reliable method of spouting the different grades of grain into their respective bins. The future grain elevators will be constructed so that the distributing spouts shall be operated by some simple mechanism located on the first floor and furnished with a system of dials and hands in such a way that if the distributing spout in the loft is intended to discharge into two red wheat bins, the hands attached to the mechanism which operates the distributing spout will plainly indicate the fact on the dials near the elevator leg where the a car is being unloaded. In elevators where I have been employed (and one was not a very old one either) this spouting business was attended to by an old fellow of Green Isle extraction whose duty was to 'tend the spouts and sweep the floors. Notwithstanding our grades were often out of balance the old fellow always contended that he had made no mistake. There were bad spots in No. 2 and good spots in the rejected and I had reason to think these spots were the result of careless spouting.

Another matter which is still primitive when considered from the point of view of its importance to other business methods is the manner in which grain is received and delivered by weight. If we deposit a sum of money in bank we are careful to count it the second time to be sure we are right. The future elevator man will do the same thing when weighing grain in or weighing out, and the time when a shipment of grain was weighed but once will be a reminiscence of the days of great plenty and consequent laxity of business methods. The future elevator will be supplied with facilities for weighing a car or a cargo of grain the second time, thus verifying both scale and record before the contents of the scale hopper is spouted into bins or vessels where its identity as to weight or grade is lost forevermore. How will this be done? By having a scale so located that the contents of all the other scales can be spouted or conveyed to it before they are finally discharged. In this way a defect in either one of the scales would be instantly de-

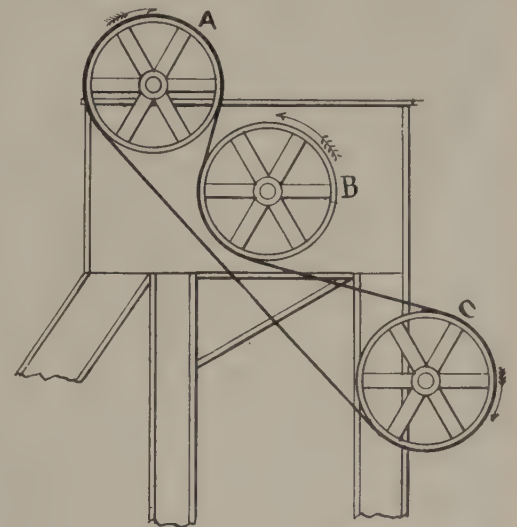
tected as well as any error in reading weights. This proof scale could be located on a floor immediately below the other scales so that the grain could be conveyed to it by means of belts.

The grain elevator is comparatively a new invention. That it is still crude with all the improvements that have been made will be more apparent in twenty years from now. For evidence that the methods of weighing are still in a primitive state we need but to refer to the apparent impossibility of locating a discrepancy of five hundred bushels between Duluth and Buffalo.

AN ELEVATOR DRIVE.

It is often found necessary to drive an elevator from a shaft running in an opposite direction to that in which it is desired to have the elevator run. When this is the case an arrangement of pulleys, as shown in the accompanying illustration, will be found to answer any usual requirements.

We here have an elevator driven by chain from a shaft running in the wrong direction. The idler *A* is



AN ELEVATOR DRIVE.

a sprocket wheel and *B* is the elevator sprocket wheel which it is desired to drive. At *C* is shown the driving sprocket wheel. By means of the idler sprocket *A* the elevator sprocket *B* is run in an opposite direction from that of the shaft upon which is the driving sprocket *C*. This will be found a very satisfactory method for accomplishing the desired result.

Barley malt aggregating 1,557 bushels, valued at \$1,901, was imported during the nine months ending with March, against 2,496 bushels, valued at \$3,145, imported during the corresponding months ending with March preceding.

A wealthy Seneca county (Ohio) farmer, who hoarded 5,000 bushels of wheat waiting for the price to advance to \$1 per bushel, has discovered that the weevils, not caring to wait for a rise, have eaten the heart out of his grain, and that the entire contents of his granary is ruined.

Russia is now on an equal footing with America in all that relates to its freedom of access to the markets of Germany; India has a great export trade; Uruguay and Argentina are increasing their area of wheat culture and surplus of production. And from these facts has been born the wheat problem in the United States.

ONE OF MANY.



On the theory that wheat was cheap, this dealer was a consistent "bull," but by the process of "evolution" he is what the necessity and the state of the market has made him, a full-fledged "bear."—*St. Louis Post-Dispatch*.

ELEVATOR

GRAIN NEWS

Long View, Ill., is to have another elevator.

Laurel, Neb., is to have a 25,000-bushel elevator.

An elevator is being erected at Staatsburg, N. Y.

O. Barnard is building an elevator at Lochiel, Ind.

M. Jackson of Durango, Colo., grain dealer, has sold out.

Robert Bell, East Fowler, Ind., will build a \$6,000 elevator.

A co-operative elevator is going to be erected at Canton, Minn.

S. W. Boughton is grain buyer for T. McGill & Co. at Milford, Ill.

L. A. Fabrick of Harlem, Ill., is having his grain elevator repaired.

J. F. Dekiere is now running the Marfield Elevator at Marshall, Minn.

Easton & Co. of Peoria, Ill., are building a grain elevator at Dunlop.

J. H. Holmes is preparing to build a large grain elevator at Gibson, Ill.

W. C. & J. C. Snyder are the leading grain dealers of Fulton, Iowa.

C. D. Resler, Hendley, Neb., dealer in grain and lumber, has sold out.

A. Walker & Co., grain and flour dealers at Raton, N. M., have sold out.

The James warehouse at Bathgate, N. D., is being altered and improved.

Martin Hamilton, Letts, Iowa, has leased the Shellabarger grain building.

Coates Bros., grain dealers at Coon Rapids, Iowa, have built a new office.

Elkhorn, Neb., grain dealers have completed a new and expensive elevator.

H. V. & T. Stutz will go into the grain buying business at Galva, Iowa.

W. C. Gemmell, Canton, S. D., intends to erect a grain elevator this spring.

T. V. Gilmore has opened quarters for buying grain and stock at Brooks, Iowa.

Harraden & Lamness, Chelsea, Mass., grain and hay dealers, have sold out.

H. Mueller & Co. of Chicago have an agent in Cedar Grove, Wis., buying grain.

J. D. Tobey of Chicago, Ill., hay, grain and feed dealer, is now Secrist & Co.

Geo. G. Stratton & Co., New Orleans, La., grain commissioners, have dissolved.

M. Montgomery of Wright Station, Iowa, is building a large granary at Fremont.

The Watertown Grain Company, Watertown, Wis., is erecting an elevator at Clyman.

A 30,000-bushel elevator will be erected at Davison, Mich., in time for the coming crop.

A movement for the erection of an elevator at Fountain Park, Ohio, is well under way.

Mr. O. H. Lumry, Fullerton, Neb., has taken possession of the elevator at that place.

John Schroder of Battle Creek, Iowa, has engaged in the grain business at Anthon, Iowa.

Mr. Quirk of Waterville, S. D., will erect a 15,000-bushel elevator if he can obtain a site.

Conover & Butterworth, Pleasantville, N. J., have bought Lake & Risley's grain elevator.

E. E. Schock, Parnell City, Mo., is running a feed mill and using gasoline engine for power.

The tow flax fibre and husk mill at Centerville, S. D., will be removed to Albert Lea, Minn.

The Charles Grain Company has been incorporated at Duluth with a capital stock of \$10,000.

Charles Tietjen, dealer in grain, hay and straw at New York City, has made an assignment.

W. H. Atwood, Providence, R. I., dealer in hay and coal, has been succeeded by J. E. McHale.

There are three or four "wild" elevators (or those outside the pool) at Buffalo. They charge about half the rates of the pool, but have little or no storage ca-

capacity, and can do nothing unless canal boats are at hand into which they may load.

Jameson Bros., Poynette, Wis., has put a large E. H. Pease Dustless Separator in his elevator.

Booth & Gibson, Bartow, Fla., dealers in hay, grain, etc., have succeeded Pearce & Booth.

The contract has been let for the erection of an 8,000-bushel grain elevator at Denison, Texas.

Allen Silvers of Alliance, Ohio, will build a grain warehouse at Berlin Center, Ohio, this spring.

R. S. Alexander has sold his elevator at Treherne, Manitoba, to the Northern Elevator Company.

Dungan & Son, Brimfield, Ill., are tearing down one of their old elevators and will build a new one.

Dr. J. R. Raby is interested in the proposed cotton seed oil mill to be erected at Gatesville, Texas.

Luke Swift, a grain operator at Baltimore, Md., has made an assignment. His liabilities are small.

Finch & Co., Nashville, Tenn., dealers in grain and hay, have been succeeded by Finch, Smith & Co.

J. S. Hayes & Co., Baltimore, Md., the well-known grain and flour company, will retire from business.

A Farmers' Elevator Company has been organized at Zumbrota, Minn., with a capital stock of \$10,000.

The Crescent Linseed Oil Company has been incorporated at Chicago, with a capital stock of \$100,000.

F. M. Baxter & Co. of Chicago, grain and provision commissioners has succeeded John A. Warren & Co.

Griffin & Donahoe have completed arrangements for the building of a large grain elevator at Clare, Iowa.

The new elevator which is a recent acquisition of Fairgrove, Mich., reports business as "quite lively."

An elevator with a capacity of 25,000 bushels is being built at Little Rock, Iowa, by Shell & Van Eaton.

The Mutual Brewing Company has been incorporated at Detroit, Mich., with a capital stock of \$50,000.

S. T. Zeller, Amboy, Ill., is building a new office and putting in a new set of scales for his grain business.

The grain elevator at Burgoon, Ohio, which was destroyed by fire at a loss of \$10,000 will soon be rebuilt.

Mrs. S. V. Cotner, Omaha, Neb., grain dealer, has incorporated under the name of Cotner Grain Company.

Sinclair & Co., Brandon, Manitoba, have sold their grain, feed and fuel business to R. Purdon and T. Smart.

John R. Moore's grain distillery at McClellandsville, Del., has renewed operations with enlarged forces.

Mr. Pray of South Waterboro, Maine, has purchased the grain business and grist mill of O. B. Emery.

The Hoopeston Grain and Coal Company has offices at Hoopeston, Ill. The company has an increasing business.

The Pratt-Baxter Grain Company at Charlesdale, Ill., are doing a good business. They are now running a hay press.

Lewis & Co. of Minneapolis have purchased the grain commission business of J. J. Atkinson at Superior, Wis.

A. R. McCandless & Sons in company with some farmers will erect a 12,000-bushel elevator near Omaha, Neb.

Andrew & Co., grain dealers at Rossville, Ill., have sold hundreds of bushels of oats to farmers for seeding purposes.

The Osborne & McMillan Elevator Company will build a frame elevator at Minneapolis, Minn., at a cost of \$70,000.

Naldrett Bros. & Co. of Middleton, Mich., general store and grain dealers, have been succeeded by J. W. Patterson & Co.

Olcott & Co., New York City, grain exporters, are now carrying on the business under the style of Olcott & Co., Limited.

H. D. Land & Co. have sold to the D. M. Reed Grain Company their business at Tama, Potter and Gladstone, Iowa.

The erection of a 250,000-bushel grain elevator at Mobile, Ala., is under consideration by the Mobile Commercial Club.

The Indiana Distilling Company is the name of a new firm which will operate a distillery to be built at Terre Haute, Ind.

One of the two elevators which were burned at Bellview, Minn., some time ago will be rebuilt in time for the coming crop by the Mulford Company. The Mulfords lost about \$5,000 by their fire, but it was

fully covered by insurance. The Interstate Warehouse and the Simpson Elevator are the only wheat buyers at that point.

H. Miller, Superior, Wis., is considering the advisability of establishing a line of country elevators to be tributary to Superior.

A new feed mill has been placed in the elevator of Suffern, Hunt & Co. at Lake City, Ill. B. Godwin is their agent at that point.

The grain firm of Watkins & Lynch at Sheldon, Ill., has been dissolved and the business will be carried on by J. and C. G. Watkins.

The grain firm of Crumpton & Crumpton, Superior, Wis., have offices in the Board of Trade, and are doing an extensive business.

S. Harker and E. J. McCormick of Cuba, Ill., grain buyers, report more business in their line the past year than for a long time.

Edwin Mezzar & Co., Dwight, Ill., have succeeded to the grain business of Wm. M. Harvey & Co., and are doing a good business.

Mitchell & Thompson, grain dealers and managers of the Whitewood Elevator at Whitewood, S. D., are about to erect a flour mill.

W. M. Miller, Table Grove, Ill., who has been in the grain business for some time, has secured control of the elevators at that point.

H. R. Grape, Hamburg, Iowa, will soon begin the construction of a 15,000-bushel elevator at that place in connection with his mill.

The Northern Elevator Company has purchased the elevator at Elkhorn and the warehouse at Maethven, Manitoba, of Atkinson & Co.

D. B. Besore has sold out his grain business at Mayview, Ill. An elevator, which is needed at that place, will be immediately erected.

Bull & Rose, Monroe City, Mo., in connection with another gentleman intend to remove their grain and brokerage office to Quincy, Ill.

Lincoln, Chandler & Co., Superior, Wis., were prominent in recent negotiations for the location of a large elevator at South Superior.

Ben Armstrong, Sheridan, Ill., has discontinued his grain business at that place and will engage in the commission business at Chicago.

Frank Marshall's new elevator at Chicago has put in an E. H. Pease No. 4 Excelsior Elevator Separator with a capacity of 2,500 bushels.

Holtzman's grain elevator at Momenca, Ill., is in good business. About 2,000 bushels of shelled corn was received in one day recently.

The Empire Grain and Elevator Company's offices on Chenang street, Binghamton, N. Y., have been moved to the Opera House block.

J. A. Weddington, Geneva, Iowa, has placed a complete outfit of the E. H. Pease Manufacturing Company's machinery in his elevator.

The Dutton Company has been incorporated at San Francisco, Cal., for the purpose of dealing in hay, grain, etc. Capital stock \$50,000.

The Texas Mill & Elevator Company at Corsicana has contracted with a Chicago firm to build grain bins having capacity of 50,000 bushels.

F. G. Yuengling, Pottsville, Pa., has a 35-horse power electric motor running his elevator. It was put in by the Chase Elevator Company.

Evans & Hare, Bellevue, Mich., dealers in grain, lumber and wool and general store, have sold their hardware stock to T. P. Martin & Co.

A new floating elevator is being erected in Erie Basin, Buffalo. Floating elevators are handling nearly all grain shipped by canal at that port.

The Farmers' Union and Milling Company at Stockton, Cal., whose mill Sperry & Co. purchased, will continue to operate its grain warehouses.

The hemp mill which had been in operation at Loda, Ill., for the past five or six years, has been torn down, as it did not do a paying business.

W. L. R. Johnson, Buckley, Ill., who is carrying on a grain business, recently sold 40,000 bushels of oats to parties at Cairo and New Orleans, La.

Russell, Dolman & Co., Kokomo, Ind., have sold their line of elevators to a Toledo syndicate for \$50,000. The concern was established in 1842.

Jas. F. Agard, who has been representing the firm of Merrill & Lyon, grain brokers of Chicago, at Salamanca, N. Y., has opened an office in Buffalo.

The Spencer-Clark Company has been appointed brokers for the Virginia Peanut Association, which includes all the peanut cleaners of Norfolk, Va.

Lewis & Co., Markleville, Ind., loaned 5,000 grain bags last year, and only 3,000 were returned to them. Lewis & Fatic, the present proprietors, would like the 2,000 bags which somebody has so kindly kept for

them, as the said bags are worth 16 cents each. The honest, down trodden farmer never keeps property not his own. That is, 60 per cent. does not.

The elevators and warehouses of Nicolas Bawlf of Winnipeg, situated at different country points, have been purchased by the Northern Elevator Company.

Prof. G. W. Hadden has formed a partnership with H. C. Bear in the grain business at Penfield, Ill. Bear & Co. is the promising name of the new company.

Since the burning of Finch & Hayward's warehouse at Brandt, S. D., the firm of Halverson & Melham have the entire grain business of that place to themselves.

Aug. Wolf & Co., Chambersburg, Pa., have received a contract for building a 10,000-bushel elevator all complete with power for R. L. Wysong, Duffield, W. Va.

One day last month the Northwestern Elevator Company sold 300,000 bushels of wheat to the Northwestern Consolidated Milling Company at Minneapolis, Minn.

The Ladd Elevator Company has been incorporated at Ladd, Bureau county, Ill. Incorporators, Thomas Cahill, August Pike and Michael Flaherty. Capital stock \$5,000.

Wm. Andrews & Co. of Morse, Iowa, have succeeded the firm of Andrews, Ohl & Co., grain, lumber and produce merchants. Mr. A. R. Ohl retiring on account of poor health.

Captain Matthews of Knightville, Maine, is building a new grain store on the site of the old structure lately destroyed by fire. It will be the largest building in Knightville.

Tate, Hinrichs & Co., Baltimore, Md., the grain and flour firm which went into liquidation a short time ago, is expected to continue in business, settling with their creditors in full.

James Ford and William Behnke, Parkertown, Ohio, will erect an elevator at that place, the farmers' plan of forming a stock company for that purpose having been abandoned.

The Winslow Bros. Elevator Company has been incorporated at Chicago with a capital stock of \$100,000. Incorporators: Francis A. Winslow, E. O. Brown and George Packard.

Henry N. Wilson and his son, Harry M. Wilson, under the firm name of Wilson & Co. will open a grain and mill feed business in Milwaukee, Wis. They will have also an office in Minneapolis.

Wilkinson & Parker, Alta, Iowa, are overhauling and improving their elevator. E. H. Pease Manufacturing Company is supplying a large dustless separator and other necessary machinery.

The Farmers' Alliance of Marshall county, Minn., has decided to erect three elevators in that county, one at Stephen, one at Argyle and one at Warren. Each will be of 20,000 bushels' capacity.

Geo. W. Dunbar and G. W. Hall have formed a partnership to engage in the grain forwarding business at Buffalo. They will control a first-class floating elevator in Erie Basin, outside the pool.

W. B. N. Kerr is building a 50,000-bushel warehouse at Hartland, Wis. Cleaning machinery, shafting, elevators, conveyors and scales are being supplied by the E. H. Pease Manufacturing Company.

H. D. Hall has bought the interest of Dr. A. Rockwell in the Zenith Elevator Company at Duluth. At a recent meeting of the company H. D. Hall was elected president, A. Rockwell, vice-president.

A Cornwall Oat Cleaner, made by the Barnard & Leas Manufacturing Company, was recently put in the New York, Chicago & St. Louis Grain Transfer Elevator at Chicago and is doing excellent work.

A non-suit has been granted in the case of B. F. Shabut vs. Thomas & Co. to recover \$5,000 with interest in connection with the shares of the Seattle Terminal & Elevator Company at Seattle, Wash.

Farmers near Osborne, Kan., are mourning the loss of Mr. Charles Daniels and 2,000 bushels of their wheat which they thought was stored in Mr. Daniel's elevator, but which was sold for his own benefit.

The United States Circuit Court has granted the petition of M. J. Forbes, receiver of the Northern Pacific Elevator Company, for the distribution of \$324,465 now in his hands, the proceeds of wheat sold by him.

The Southern Kansas Grain Company has been incorporated at Fredonia, Kansas City and other points in Kansas, with a capital stock of \$20,000. Directors: Henry T. Pratt and Charles A. Pratt of Chicago, D. P. Pratt, R. D. Mundell and S. S. Kirkpatrick of Fredonia.

John H. Rieger, who formerly owned an elevator at Glencoe, Minn., has brought suit against the Northern Pacific Grain Company at Minneapolis, Minn. The plaintiff claims to have sold the grain company about 9,000 bushels of wheat, for which the company agreed

to pay \$6,459.27, of which no part has ever been paid. The defendant claims that the wheat was sent it to sell on commission and that it was not bought.

Work has been resumed on the 750,000-bushel elevator which the Osborne & McMillan Elevator Company began last summer in Minneapolis. It is expected that the house will be completed early this summer.

Nye & Schneider are laying the foundation for a new elevator at Surprise, Neb., which is to take the place of the one destroyed by fire some time ago. Their new house will have a capacity of 12,000 bushels.

The Wisconsin Malt and Grain Company of Appleton, Wis., has a mortgage on the hall of the Turner society of that city, and as interest is not forthcoming the company proposes to foreclose and turn the hall into a grain warehouse.

Alexander Baillie, manager for Balfour, Guthrie & Co., Tacoma, Wash., one of the largest wheat shipping firms in the world, said recently that shipments from Tacoma had been enormous, but that the movement was now nearly over.

The Lake Superior Grain Company, Superior, Wis., was the first company to adopt a feed mill in their elevator at that city. They have a mill with a capacity of 25 tons of feed per day, and are doing a profitable grinding business.

The Duluth & Winnipeg Railroad Company has amended its articles of incorporation to include the power to construct elevators, factories and other buildings along the proposed line, beginning at Superior and extending to the Lake of the Woods.

The Buffalo Forwarding Company has been incorporated at Buffalo, N. Y., to carry on a grain and merchandise carriage business by canal. Capital stock, \$10,000; directors, Frank Beadle, W. C. Jones, O. A. Crandall, Harris Fosbinder and Thos. M. Ryan.

There is said to be a first-class opening for an elevator at Velasco, Texas, a concession for the establishment of which may be obtained. In another column will be found a communication, setting forth the growing importance of Velasco as a grain market.

The suit of Morris Hannan against Hart & Lewis of Clio, Mich., has resulted in a verdict for the plaintiff of \$19.95. Hannan sued to recover on wheat for which he claims the produce firm paid 8 cents more a bushel to the man who worked his farm on shares than to himself.

The Diamond Elevator and Milling Company has been incorporated at Minneapolis, Minn., with a capital stock of \$100,000. Incorporators, John C. Woodworth, F. R. Godfrey, Ellen A. Woodworth and Joseph L. Fournie. The company will do a milling business.

The grain commission firm of Gaylord, Downey & Co. of Oswego, N. Y., formerly Irwin & Sloan, has been dissolved, Mr. Gaylord retiring. The business will be carried on by Robert Downey, Dudley M. Irwin and Robert Downey, Jr., under the firm name of Downey, Irwin & Co.

McDermott & Mickle of Piper City, Ill., have purchased the grain business of the East Elevator at Watseka, Ill., of R. W. Sutcliffe, Morocco, Ind. Mr. J. L. Caldwell has heretofore had charge of the elevator for Mr. Sutcliffe. Mr. McDermott was formerly in the grain business at Piper City.

The Union Railroad Elevator and Transportation Company of Toledo, Ohio, are about to place elevator and conveyor facilities to connect their property with the Lake Shore Railroad Company system, to enable them to handle their large and growing business of transporting through grain via the lakes.

It is rumored among Board of Trade people at Chicago that a large syndicate is being organized to build elevators for exclusive public storage purposes, and that it is proposed to reduce the rate of storage from $\frac{1}{2}$ cent for first elevation and 1 cent a month thereafter to $\frac{1}{4}$ cent for the first storage and $\frac{1}{8}$ cent a month after that.

In the case of Norman Bass vs. the State of North Dakota, the court decided that the state has a right to fix charges for storage and insurance in a private elevator which contains surplus room for public storage. The case is now before the Supreme Court. The elevator in question is a combination house, being partly private and partly public.

Hay is worth \$20 a ton and barley is going up. Which fact being fully realized by some thieves who might have been watching the market. Manna Bros' warehouse at San Diego, Cal., was broken into and 30 sacks of barley stolen. At another point the thieves proceeded to lay hands on some hay, in which act they were discovered. The thieves escaped, but the property was recovered.

The Seckner Contracting Company of Chicago have a new elevator in process of construction in the state of Michigan and one in Ohio. Both houses have a capacity of 50,000 bushels. They are also making plans for an elevator at Ogdensburg, N. Y., of 200,000 bushels' capacity, and are figuring on making extensive repairs on one of the principal elevators at Chicago. The company outside of their elevator work

have been awarded the contract for water works in East Chicago for \$98,000. They have in process of construction water works at Reidsburg, Wis., and are just completing works at Park Ridge, Ill.

The Lake Superior Grain Company's feed mill at Superior, Wis., is now in operation. The mill has a daily capacity of 25 tons, and is designed expressly for grinding corn and oats. Power is supplied by a gas engine.

Shortages have occurred at the Bidwell warehouse at Chico, Cal., the cause of said discrepancies being J. Coll and Paul Zeph, now under arrest for stealing wheat. Paul Zeph is an employee of the Sperry Mill Company and was apprehended in the act of transferring sacks of wheat from a car at the warehouse to a wagon.

Carrier, the flour and grain merchant of Quebec who was on trial for defrauding the Canadian Pacific Railway out of a large amount of money, has been acquitted. Both judge and jury decided that while guilt was clear, evidence was lacking. As he is still in the hands of the law, however, he may yet meet punishment.

The grand jury at Le Sueur, Minn., has found three indictments against the stockholders of the Gilbert Grain Company of Minneapolis who were short of wheat in their elevator at Ottawa. The feeling at that point against elevator companies is very strong, the people of the vicinity having lost nearly 60,000 bushels of wheat last year.

THE HAY AND STRAW DEALERS' ASSOCIATION OF NEW YORK.

The sixth annual meeting of the Hay and Straw Dealers' Association of New York took place at Syracuse, N. Y., April 11. The old officers, consisting of Mr. C. G. Sheehan of Albany, president; B. F. Slocum of Ithaca, vice-president, and Willis Bullock of Canajoharie, secretary and treasurer, were re-elected for the ensuing year.

Great interest was shown in the proceedings and a large number of the members and visitors were present. Hay dealers from New York, Ohio, Pennsylvania and other states were in attendance, and the cities of New York, Boston, Baltimore and Philadelphia were well represented.

As the association is now out of debt the membership dues were reduced from \$5 to \$2, the annual dues being placed at \$2, and the unpaid dues up to date reduced 50 per cent.

The convention indorsed the petition asking Congress to maintain the duty on hay at \$4 per ton.

It was reported that the outlook for the trade was not very bright. Statistics coming from the country at large indicate a much larger surplus of hay left over for market than there had been at this date for a number of years.

Addresses were delivered by E. L. Rogers of Philadelphia, C. H. Bates of Boston, Mr. Emerson and Mr. Frank Williams of New York, and J. T. Clendenin of Baltimore.

After deciding to hold its next meeting at Syracuse in August next the convention adjourned to the banquet hall.

THE GOVERNMENT'S PAWN SHOP.



UNCLE SAM.—"Dimes vas ferry hart, mine frent. Ve can't gif you much on dose."

The Grain Inspection Department of Minnesota earned \$5,981.90 last March.

WATERWAYS

The Manchester Canal will be formally opened by Queen Victoria May 21.

The Sault St. Marie Canal will probably be completed by June 30 next.

There is a scheme to build a 14-mile canal between lakes St. Clair and Erie.

The winter fleet at Chicago, the largest in the history of her grain trade, has all left the harbor.

The number of tons of agricultural products moved on the Welland Canal during the year ending June 30, 1893, was 466,672.

The steamship Curry cleared West Superior April 26 with a cargo of 115,000 bushels of wheat, breaking the record for large cargoes at that port.

The ship Undaunted, which we reported last month as having sprung a leak when leaving San Francisco for Queenstown with a large cargo of wheat, has been condemned. Most of the wheat was saved.

The old Columbus Canal and Power Company of Columbus, Ohio, has been reorganized, and is agitating the old scheme for a canal at that point. The United States Government will probably be asked to pay for it.

Steamer W. H. Sibley is taking 50,000 bushels of barley and 10,000 bushels of oats from Milwaukee to Oswego at a uniform freight of 2½ cents per bushel. This is the lowest rate on grain ever made from Milwaukee to a Lake Ontario port.

The Erie Canal opened for the season May 1 with at least one-third more boats locked in at Albany, N. Y., than last year. The principal reason for the increase was that the opening of the canal had been delayed three weeks longer than was necessary.

The scheme of Representative Simpson for a system of canals and waterways connecting the great lakes with the Atlantic Ocean is said to be entirely impracticable at this time, and not likely to meet with approbation by either Canada or the United States.

The steamship Mahoning left Duluth April 18 with a full cargo of flour for Buffalo. It was the first departure of the season. The first departure last year was on May 7. Ships arrived at Duluth April 19 this season, while last year the first arrival was on May 9.

It is reported that the Yorkshire Navigation Company has made arrangements to purchase the waterways owned by the Manchester, Sheffield & Lincolnshire Railway Company with the view of constructing a ship canal that will connect Sheffield with the sea.

The city council of Philadelphia has been petitioned to appropriate \$10,000 for a preliminary survey of a proposed canal to connect that city with New York, a distance of about 44 miles. The proposed width is 90 feet at the bottom and 150 at the top and a draught of 20 feet.

Two cargoes of about 40,000 bushels of grain were recently loaded into vessels at the Pacific Elevator at Chicago for shipment to Milwaukee. The grain is to be used for milling purposes, and the freight paid for this short trip was 1½ cents, or one-eighth of a cent more than the price paid for taking the same grain to Buffalo.

It is reported that several lake propeller owners are making arrangements to take grain and ship it to New York by canal. Downey, Irwin & Co. of Oswego, who own grain elevators at that port, offer to elevate and do all the trimming of the grain in the vessels and boats for one-quarter of a cent per bushel, which is 1.1 cents a bushel less than the exorbitant charges at Buffalo.

Col S. C. Reynolds is shipping large cargoes of corn to Europe from Toledo, Ohio. The grain is taken to Kingston and transferred to St. Lawrence River barges which will load it in ocean steamers at Montreal. About 3,000,000 bushels of corn will be shipped abroad this way during the spring, and in the same way it is expected that 5,000,000 bushels of wheat will be taken to Europe in the early summer.

The Indiana Society of Civil Engineers has formally petitioned Congress to provide for a preliminary survey for a ship canal to connect Lake Michigan with the Wabash River, and to restore such portion of the Wabash and Erie Canal as may be advantageous to continue that canal to Lake Erie. Also for improvement of the Wabash, Ohio and Mississippi Rivers for navigation in connection with the canal.

The Canadian canals, which will be opened for navigation in 1896, will enable a vessel leaving Duluth, Minn., to proceed to Hong Kong, China, if desired, without breaking bulk, and return by the same route to the head of Lake Superior. Lake craft having a cargo capacity of 2,500 tons and drawing 14 feet of water, and ocean craft of that size may carry their

cargoes to Chicago, Duluth, or any part of the great chain of lakes.

It is given out at Duluth that grain shipments from that port will be lighter during the remainder of the crop year than during any similar period for years. Vesselmen hold tonnage nominally at 2½ cents Duluth to Buffalo, but there is said to be no demand for it at any price over 2 cents.

The Chicago Board of Marine Underwriters have adopted the following rates of grain insurance: To Port Huron, Sarnia and Detroit River, 40 cents per \$100; to Georgian Bay, 50 cents; to Lake Erie, 50 cents; to Lake Ontario, 60 cents; to Ogdensburg, 60 cents; to Montreal, 70 cents.

There was 55,768,726 bushels of grain exported from the port of New York during the year 1893. Three cargoes were sent out in sailing vessels, 171,427 bushels, and in 324 steamers there was sent out 55,597,299 bushels in 1,022 cargoes. There was not one American vessel employed, while there were 217 British vessels, carrying 604 cargoes of 34,259,656 bushels. Germany had 40 vessels, carrying 4,292,737 bushels in 128 cargoes; the Dutch had 11 vessels, carrying 4,651,111 bushels in 92 cargoes; the Belgians 12 vessels, carrying 5,240,242 bushels in 76 cargoes; the French 15 vessels, carrying 2,400,269 bushels in 43 cargoes. The Portuguese had 6 vessels employed which carried 2,213,108 bushels in 29 cargoes; 4 Norwegian vessels took 124,502 bushels, 7 Spanish took 597,149 bushels and 6 Italian 813,516 bushels.

OBITUARY

M. Walter Scott, Creston, Iowa, grain dealer, died May 8.

Narcisse Gregoire, Quebec, dealer in grain and hay, is dead.

Herman Crohen, well known in the grain trade of New York City, and a member of the firm of Crohen, Mascord & Co., is dead.

Charles Canning, member of the Duluth Board of Trade and a grain commission man, died at Hendrum, Minn., April 1. Resolutions of condolence were passed by the Exchange.

Andrew McFall, grain merchant and miller at Bolton, Ontario, died April 28. Mr. McFall had been a prominent miller and grain merchant at Cardwell for years, and he will be greatly missed.

Nathan C. Simons, an old and most respected member of the grain trade of Buffalo, is dead. He had formerly been a miller, and had an extensive trade with millers throughout the state. Mr. Simons, after being in business for 30 years, retired last fall.

Hon. Alexander G. Cattell, at one time a grain merchant at Philadelphia, died at Jamestown, N. Y., April 8. He was one of the founders of the Corn Exchange Association, now the Commercial Exchange, and was president of that association in 1857. In 1866 he was United States Senator from New Jersey, which post he held until 1871.

OUR CARD BASKET

We have received calls from the following gentlemen prominently connected with the grain and elevator interests, during the month:

J. H. Heatherington, Shelton, Neb.
George L. Jarrett, Des Moines, Iowa.
J. S. Leas of Barnard & Leas, Moline, Ill.
H. A. Barnard of Barnard & Leas, Moline, Ill.
L. S. Hogeboom, representing The Knickerbocker Company.

Walter A. Calhoun, with James Stewart & Co., St. Louis, Mo.

F. Prinz of Prinz & Rau Manufacturing Company, Milwaukee, Wis.

G. M. Robinson of the Charter Gas Engine Company, Sterling, Ill.

C. R. Knickerbocker of The Knickerbocker Company, Jackson, Mich.

C. H. Adams of the E. H. Pease Manufacturing Company, Racine, Wis.

H. C. Robinson, Moline, Ill., representing the J. B. Allfree Manufacturing Company.

C. H. Cooley, manager of the automatic scale department of the Pratt & Whitney Co., Hartford, Conn.

Broom corn valued at \$18,961 was exported during March, against an amount valued at \$22,515 exported during March preceding; and during the nine months ending with March broom corn valued at \$178,745 was exported, against an amount valued at \$121,144 exported during the corresponding months ending with March preceding.

ITEMS FROM ABROAD

During the last part of April Argentina shipped out 5,250,000 bushels of wheat.

Flax is being introduced into Queensland by the government to test its adaptability to that country.

It is estimated that the wheat crop of India this year is 232,000,000 bushels, against 264,000,000 bushels in 1893.

Argentina's wheat is inferior to our No. 1 Northern, and sells in Europe at about 10 cents below American spring wheat.

The agricultural congress at Rome, Italy, adopted a resolution April 16 favoring an increase in the tariff on wheat to \$1.80 per 220 pounds.

Russia is shipping much more freely than in 1893, having exported 7,128,000 bushels of wheat during March, against 3,752,000 bushels for the same time last year.

The purchases of wheat of all European countries have been large. Germany, although taking only 33,000 quarters direct, will eventually receive a large share of the Dutch and Belgian imports.

Because of the persistency of wheat shippers in Argentina in exporting liberally, and their ability to sell at low prices, that country continues to be one of the main obstacles in the way of an advance in wheat.

The total shipment of wheat from all Australian ports to Europe from January 1 to April 21 amounted to 666,000 quarters (of about 8 bushels each), compared with 756,000 quarters in 1893, and 395,000 in 1892.

India, while at present having a large surplus of wheat on hand, is now practically out of the field as an exporting country, and as far as present indications show that country is not likely to cut much figure until higher prices prevail in European markets.

A large meeting of merchants was held in Antwerp, April 18, to protest against the import duties which the Belgian government proposed to fix on cereals. Belgium has partially renounced that intention, it seems, and will limit the imposition of the new tax to flour.

During the month of March Sweden imported 19,000 quarters (of 8 bushels each) of wheat, and 7,000 sacks of flour. From Aug. 1, 1893, to March 31, 1894, the total net import of the two articles was 458,000 quarters, compared with 444,000 quarters in the corresponding period last season.

During March the arrivals of grain in Holland according to official returns included 200,000 quarters (of 8 bushels each) of wheat, and 54,000 sacks of flour. The outgoings were 123,000 quarters wheat, and 11,000 sacks of flour. Since the first of last August the net import of the two articles has equalled 970,000 quarters wheat, compared with 1,070,000 quarters in the corresponding period last season.

Under the new commercial treaty between Germany and Russia the former country admits Russia as one of the "most favored nations." In 1893, owing to disagreements between Russia and Germany, the rates of duties on all imports from Russia into Germany were raised. Russia then paid \$17.85 duty per ton on wheat and \$37.50 per ton on flour—over \$3 per barrel. This was practically prohibitive, and America enjoyed a great advantage over Russia, paying a duty of \$8.33 per ton on wheat and rye and \$17.30 per ton on flour, about \$1.50 per barrel.

The prospects for the future of Argentina are bright at present, and it will probably soon be more prosperous than ever before. The country is comparatively new and but partially developed. There are vast tracts of land yet in a wild state, and a great deal more which can be made productive by irrigation. The soil of the country is naturally rich and very productive. It is watered by great rivers, and in parts of the country where the fall of rain is uncertain it is proposed to construct great irrigation works, which will have a wonderful effect in increasing its productive capacity.

Owing to the extension of railways both Bombay and Kurrachee have quite outpaced Calcutta in wheat shipments. In the districts supplying Calcutta the home consumption of wheat has greatly increased, the consumption in lower Bengal having been trebled in three years. This may be partly due to the lower prices, and may mean that the surplus from the last crop may not be so large. The average export of wheat from India is only 12½ per cent. of the total crop, and the total wheat crop is only about 2½ per cent. of the total food supplies of the teeming millions of India.

In the shipment of hay only one kind should be in one car, and each bale should be tagged with the correct weight of each.

Fires, Casualties, Etc.

An elevator and flour mill at Bourbon, Ind., was burned April 28. Total loss \$40,000.

Lapelle & Co.'s grain elevator at Swanton, Vt., burned April 29. Loss \$30,000; insured.

An elevator at Guthrie Center, Iowa, was destroyed by fire April 12. Loss \$3,000; insurance \$1,300.

A grain elevator at Argenta, Ill., was struck by lightning recently, but sustained little damage.

C. W. Franklin's mill and elevator at Franklin, Ind., has been burned. Loss \$25,000; partly insured.

The Northwestern Elevator at Ardock, N. D., was burned on May 2, with about 15,000 bushels of wheat.

B. M. Allen's feed store at Denver, Colo., was robbed recently of a large quantity of hay, oats and corn.

Finch & Hayward's warehouse at Brandt, S. D., was burned recently, together with 2,000 bushels of wheat.

Jas. Quirk & Co.'s elevator at Belview, Minn., burned recently, together with about 4,000 bushels of wheat.

J. M. Palmer & Son's mill and elevator at Embarrass, Wis., was burned recently. Loss \$2,500; insurance \$500.

H. Eigerman's brewery at Muscatine, Iowa, was almost totally destroyed by fire May 4. Loss \$8,000; insurance \$2,000.

A portion of the Anchor Line Elevator at Vicksburg, Miss., gave way recently, letting some flour and meal through a floor.

C. W. McDaniel's elevator and flouring mill at Franklin, Ind., burned April 25. Loss estimated at \$50,000; fully insured.

Lightning struck the new grain elevator of Harwood & Code at Bradford, Ill., but the building sustained but little damage.

The elevator at Alexandria, S. D., belonging to Bender Bros. & Co., of Spencer, Iowa, was destroyed by fire May 8, caused by lightning.

Fire caused by lightning destroyed the warehouse at Alexandria, S. D., belonging to the Hunting Elevator Company at McGregor, Iowa.

Heyward & Co.'s elevator at Kansas City burned recently, together with about 24,600 bushels of grain. Insured for about half. They will rebuild.

Butler's Elevator at Clarinda, Iowa, was burned some time ago. Loss on building about \$4,000; no insurance. Grain stored was insured for \$1,200.

Michael Malone's granary and corn house at Montgomery, Minn., burned April 25. Loss \$2,000; small insurance. The fire is supposed to have been incendiary.

The Missouri Grain Company's warehouse at Rich Hill, Maine, containing grain, hay, groceries, etc., was consumed by fire last month at a loss of about \$6,000.

Simon Miller's warehouse at Monée, Ill., containing grain, etc., burned recently. Mr. Miller's loss is about \$10,000, insured, while farmers will be heavy losers on stored grain.

Carl Lloyd, a grain dealer at Northville, S. D., was smothered to death by grain bursting from a bin in his elevator. He was covered with wheat and died before help arrived.

The Ferguson Company's warehouse at Escanaba, Mich., which was recently damaged by fire to the extent of \$700, is believed to have been set on fire by a discharged employee.

Bartlett, Kuhn & Co.'s elevator at Mattoon, Ill., was destroyed by fire April 29. There is said to have been but little grain in the bins, and the loss was covered by insurance.

The Golden Belt Elevator, owned and operated by F. A. Wright at Frederick, Kan., was recently destroyed by fire, together with 4,000 bushels of wheat. Loss \$4,000; insured for one-half. Mr. Wright intends to rebuild.

The malthouse of the Wisconsin Malt and Grain Company at Appleton, Wis., was damaged by fire April 24 to the extent of \$25,000. The loss on the building is covered by insurance, but the loss on stock in excess of insurance is about \$4,000.

The elevators situated at Belview, Minn., belonging to the Mulford Elevator Company and the Interstate Grain Company, Minneapolis, Minn., were destroyed by fire April 10, together with 6,000 bushels of grain.

Loss \$6,000; partly insured. The fire was of incendiary origin.

The elevator at Charlotte, N. Y., owned by E. M. Upton and H. H. Craig, was destroyed by fire April 29. The fire is believed to have been of incendiary origin. Loss about \$30,000; partly covered by insurance. It is doubtful whether it will be rebuilt.

Fire broke out in the Ryan Commission Company's elevator at St. Louis, Mo., and spread to the Crown Linseed Oil Works adjoining, April 20. Loss to elevator about \$30,000; Crown Oil Works \$120,000. The fire is supposed to have originated by spontaneous combustion.

Briggs & McMay's railroad warehouse at Mauston, Wis., collapsed recently and is a total wreck. The contents consisted of 600 bushels of oats, 300 bushels of corn, about 11 tons of feed, etc. The loss to grain and building is heavy. Not every barn builder can erect a house that will stand.

THE EXCHANGES

Chicago Board of Trade memberships are held at \$325 to \$845.

Tickets of membership to the New York Produce Exchange are held at \$490.

The trade in new crop timothy opened at Chicago, May 11, with sales for September delivery at \$3.45.

The Milwaukee Chamber of Commerce has adopted a resolution protesting against the passage of the Hatch bill.

The Cincinnati Chamber of Commerce has adopted resolutions opposed to the discontinuance of government crop statistics and in favor of increase efficiency in that department.

At a recent meeting of the board of director of the Merchants' Exchange of St. Louis, Mo., resolutions were adopted protesting against the passage of the Hatch Anti-Option Bill.

The rumored short line in the flaxseed market at Chicago has been overestimated. Seed stored in the Northwest has been transferred to Chicago and all contracts have been met promptly.

A plan is on foot at the St. Louis Merchants' Exchange to get the commercial bodies all over the United States to protest against the issuance of crop reports by the government. It is believed that a united effort and a vigorous remonstrance will do away with these so-called statistics.

The committee appointed by the Baltimore Corn and Flour Exchange to visit New York and investigate its clearing house system for grain has not yet made its official report. The committee was pleased with the system in vogue at New York, saying it had many advantages over that employed at Baltimore.

Discussion relative to the standards of Manitoba wheat took place at a recent meeting of the grain examiners of the Toronto Board of Trade. The idea was advanced by some that the matter should be left entirely in the hands of Western people, instead of having delegates come from the East to assist in fixing the standards.

We are indebted to Mr. George F. Stone, secretary of the Board of Trade of Chicago, for a copy of the thirty-sixth annual report of the trade and commerce of Chicago for the year ending Dec. 31, 1893. The book contains complete detailed statistics and other matter relative to the grain and flour trade, etc. It is a valuable work and conveniently arranged.

The new Board of Trade of West Superior, Wis., transacted its first business May 1. The Board has adopted the Minnesota state inspection for grain and will accept the weights of that department. The same elevators will be made regular on the Superior Board, complying with their rules, as are now regular on the Duluth Board, and the contract, grade, No. 1 Northern, will be the same as on the Duluth Board. The Superior Telegram issued a special Board of Trade edition for the occasion.

At a recent meeting of the Pittsburg Grain and Flour Exchange last month resolutions were adopted protesting against the passage of the Hatch anti-option bill. They request an amendment so that if the bill is made a law it will not apply to legitimate dealers in farm products, who contract to deliver goods at a future date. They say that if the goods are actually delivered within a reasonable time, such as 30 days, dealers should be exempt from punishment provided. In general, it was declared to be a bold attempt to place a large class of business men in the same class with gamblers.

PERSONAL

Nick Boor of Ashton, Iowa, grain dealer, has been stricken with paralysis.

Charles L. Moore has been appointed state grain inspector at Kankakee, Ill.

Tim Ross, a grain dealer at Gibson, Ill., is a candidate for treasurer of Ford county.

John Stier will hereafter manage the grain business of D. Rothschild & Co. at Minden, Iowa.

F. H. Peavey, of Minneapolis, is about to start on a two months' trip to Europe, accompanied by his family.

W. E. Harris, well known in grain circles of Baltimore, Md., has resigned his position as western grain buyer for Tate, Muller & Co.

W. K. Balsley, a commission merchant of Chicago, was found on the street in a state of mental derangement, from which he has not yet recovered.

John Martin, agent of the Mulford Elevator Company of Belview, Minn., whose house at that point burned recently, will be retained as their agent when their new elevator is erected.

Bernard Eckhout, of the grain exporting firm of Eckhout, McLean & Co., of Baltimore, was recently married to Miss Faith McNamee, and himself and wife have sailed for Scotland.

Charles Kennedy, a leading grain dealer of Buffalo, has closed his office and gone on a pleasure trip to Europe. He is the president of the Car Grain Association, which secured the through billing arrangement which has proved of such great advantage to the trade.

CROP CONDITIONS.

ILLINOIS, OAKLAND, COLES Co.—Crops are very promising at present and the farmers are beginning to smile again. J. B. McCLAIN.

KANSAS, INMAN, McPHERSON Co.—McPherson county has been blessed with a good soaking rain. Wheat and corn are in excellent condition, and we expect a large crop of both. Wheat sells at 40 cents, corn 41 cents. J. A. HARRINGTON.

CALIFORNIA.—The needed rain has come and the result is the expectation of an average crop. Before the rains the yield did not seem to promise over 600,000 tons, but now 1,500,000 tons is looked for. Yields will vary much in different parts of the state. In some sections wheat and barley are good, in others more rain is needed.

GOVERNMENT CROP REPORT.—The May report of the statisticians of the department of agriculture places the condition of winter wheat at 81.4 as against 86.7 the previous month, being a falling off of 5.3 points. In 1893, at the same date, the condition was 75.3, a little over 2 points lower than the previous month. The averages for the principal states are: Ohio 90, Michigan 83, Indiana 90, Illinois 89, Missouri 83, Kansas 75, Nebraska 59, and California 52. While the improvement during most of April has been considerable in most of the states, the result of the cold weather in March has been shown to have been more damaging than was reported at the time. The advices from Kansas and Nebraska indicate that the damage from the cold weather has been augmented by drouth and high winds and much of the area has been plowed up and put in other grain. In California the drouth, accompanied by high winds, has proven very disastrous to the crop and in many places it is said to be an entire failure in consequence. In other states the plant is doing very well considering the set-back caused by the cold weather. The average condition of barley is 62.83, against 86.6 last year. The low condition is the result of the drouth in California, it being the largest producing state.

A Toledo firm comparing rules governing the public warehouses at Toledo with those at Chicago said: "No mixing is allowed in any of the elevators here, and no grain is transferred from irregular to regular elevators. No elevator which is run by firms or corporations in the grain trade is regular for delivery on contracts. Inspection certificate out shows what elevator the grain is from. Any grain which can be improved by blowing is blown on arrival for the benefit of the country shipper. The public elevator charges in Chicago are too high. Elevation there is 1 cent per bushel, and storage 1 cent every ten days. They should be reduced to the rates here, which are 1 cent elevation; 1/2 cent storage, with a cheaper winter rate."

THE MARKETS.

We will be pleased to publish under this head short reviews of the conditions ruling in the different markets. Copy must reach us by the morning of the 14th of each month.

HAY AT CHICAGO.—M. M. Freeman & Co., Chicago, report the receipts of hay at that point on May 11 at 370 tons with shipments at 30 tons. **TIMOTHY.**—With moderate offerings and good demand the market is firm and well maintained. No. 1 \$10.00@11.00; No. 2 \$8.50@9.50; Mixed \$7.50@8.50. **PRAIRIE.**—Choice hay firm and finding ready sale. Receipts to-day are light, yet somewhat larger than they have been. Choice to Fancy Iowa Upland \$9.00@9.50; Fair to Good Iowa Upland \$8.00@8.50; good feeding hay \$6.50@7.50. **STRAW.**—Arrivals on the increase; market active though a little easier. Rye. \$8.50@9.25; oat and wheat \$6.00@6.50.

GRAIN REPORT OF J. & M. SCHWABACHER, LIMITED, New Orleans, La., May 8.—**TIMOTHY HAY.**—In consequence of light receipts Choice hay has advanced, and arrivals are readily taken. Low grades show no improvement. Quotations are as follows: Choice \$16.50; Strict Prime \$15.50; Good Prime \$14.00@14.50; Prime \$13.00@13.50 per ton. **PRAIRIE HAY.**—Prairie hay is in fair demand at \$8.50@9.00 for choice stock. **CORN.**—In fair supply, and held at 52 cents per bushel for No. 2 White; Yellow at 49 cents, and Mixed at 48½ cents per bushel sacked. **OATS.**—Stocks are moderate, but the sudden advance seems to have temporarily checked the demand. Quotations as follows: No. 2 White 45 cents; No. 2 Black Mixed 44½ cents per bushel sacked. There have been very few sales yet since the price of No. 2 Mixed went above 42 cents. **WHEAT BRAN.**—Quiet at 75@80 cents per 100 pounds.

GRAIN REPORT OF L. NORMAN & CO., LIMITED, London, April 30.—The wheat trade has ruled extremely quiet the past week, and very little business passing. The quantity afloat for the United Kingdom and Continent again showing an increase this week deters buyers from operating and the lack of support from America tends to depress the market. With favorable crop reports from Russia shippers have been offering more freely, and a fair business has been done in this class of wheat. La Plata wheats afloat and for present shipment have met with more attention owing to sellers offering at less money, but for distant shipments the premium asked restricts business. Australian and Calcutta are held above buyers' ideas. Americans are offering more freely, and business has been done to-day at sixpence decline on the week. Canadian wheats have been offering, but the prohibitive prices asked by shippers prevent business. **HARD MANITOBA.**—A fair business has been done, but transactions to-day show 3d decline on the week, 25s 6d c. i. f. being taken for May-June shipment. **HARD DULUTH.**—A parcel for prompt shipment sold during the week at 26s 1½d c. i. f., and there are sellers to-day at 26s. **GOOSE WHEAT.**—To London 25s 6d c. i. f. is bid, but shippers' views being above this prevents business. **BARLEY.**—Nothing doing in malting qualities; grinding barley dull and depressed. **OATS.**—With open weather and liberal offers from Russia trade is quiet, and prices difficult to maintain. American and Canadian shipments were again nil last week. **PEAS.**—During the week a parcel sold at 24s 9d c. i. f., but sellers again ask 25s to 25s 3d with buyers at 24s 6d to 24s 9d. **HAY.**—With continued wet weather and consequent improved prospects of a home crop the demand has fallen considerably, and lower prices are taken to effect sales. Canadian for shipment is offering at £4 5s 0d c. i. f. with no buyers, while sound delivered ex-ship Thames is selling at £4 2s 6d.

CINCINNATI MARKETS, April 12.—Collins & Co. report: The weather conditions continue to be favorable for the growing crops, with seeding operations about completed, and in some sections corn has advanced sufficiently to admit of cultivation. With the prospects more favorable there is a disposition to market grain, and the receipts are growing more liberal. Prices show but little decline as yet, but it is expected that a larger movement will cause values to rule lower, and the first arrivals will command the most money. Stocks are considerably reduced, and more activity is looked for on larger offerings. **WHEAT.**—The market is easy on a slow inquiry, with light offerings. Choice 54 cents; No. 2 red 53 cents; No. 3 red 52 cents. **CORN.**—The receipts the past week were not large, with the bulk of the arrivals coming to fill contracts, and prices have ruled steady. No. 2 White 43@43½ cents; No. 2 Mixed 42@42½ cents; No. 3 White 42@42½ cents; No. 3 Mixed 41 cents. **OATS.**—The strong Western markets and the scarcity of offerings early in the week forced prices on oats considerably higher, and out of proportion to prices ruling in other markets. At the close the West ruled easier and lower, and with more free offerings to arrive. Buyers are inclined to wait for a more settled condition of the market. Stocks are small, and at lower prices we look for more activity in the demand. No. 2 White 39@40 cents; No. 2 Mixed 38@39 cents; No. 3 White 38@39 cents; No. 3 Mixed 37@37½ cents. **RYE.**—Is very little offered, and the demand is moderate. No. 2 54@55 cents. **HAY.**—Receipts for the week 1,437 tons; shipments 492 tons. For the corresponding week last year receipts 1,446 tons; shipments 849 tons. The choice and No. 1 grades are moving readily, and what the trade continue to inquire for, with the offerings few. Second and the medium grades are slow sale, and it requires considerable effort to place them at anything like satisfactory prices. The outlook is not favorable for any higher prices on hay in the near future. Choice hay is quotable at \$12.00@12.50 per ton; No. 1 at \$11.50@12.00; No. 2 at \$9.00@10.00; Mixed at \$8.00@9.00; Clover at \$6.50@7.50; Choice Upland Prairie at \$6.00@7.00; bright straw at \$4.50@4.75. **MILL FEED.**—Dull, with inquiry quite light. Bran at \$11.50@12.00 and middlings at \$11.50@12.00.

Mrs. Ikenheimer.—"Jakey, come dake dis bucket down to Mistder Rupertdsberger und dell him to fix idt for mudter." Jakey.—"Cand't I dake idt to the bucketd shop wadt fader tadks about?" Mrs. I.—"Mein Godt, no, mein sohn; do you wandt us to luse idt?"

Mr. Hatch is confident of the passage of his anti-option bill. He says again that all its objectionable features have been eliminated, and that the only sections which now meet with any serious opposition are those relating to bucket shops. But the elevator men and grain dealers of the Northwest are making some vigorous protests, Mr. Hatch to the contrary notwithstanding.

THE KANSAS CITY HAY DEALERS.

The Hay Dealers' Association of Kansas City held a meeting April 19 for the election of officers for the coming year and transaction of other business. Officers were elected as follows: President, J. B. Spellman; vice-president, E. R. Boynton; secretary and treasurer, C. J. Greischar. Also some changes were made in the board of directors.

It was decided to raise the price of car door inspection from 25 to 35 cents, 10 cents to go into the treasury of the association. Mr. T. Smith was elected chief hay inspector.

It was reported that the C. & N. Railroad, contrary to all rules enforced by the other roads of the city, was charging \$2 for switching cars to other roads, in order to unload them at other warehouses. No other road is making any charge whatever, and it was agreed that the association would bring all possible pressure to bear to get this road to abolish the charge.

Other business of minor importance was transacted, when the meeting adjourned.

Although but few meetings have been held during the year, the attendance at this meeting was good. It was urged that every receiver of hay in the state join the association.

THE WICHITA GRAIN CONGRESS.

The National Grain Congress convened at Wichita, Kan., April 17, being attended by representatives of Southern Kansas, Oklahoma, Louisiana, Texas, Arkansas, Nebraska, Colorado, Florida, Alabama, South Carolina, Iowa and Minnesota.

The prime object of the congress was to foster a commercial union between the South and the West and to devise ways to turn the tide of Western export grain shipments from Eastern to Southern ports, by securing an outlet on the Gulf of Mexico. New Orleans had a strong delegation present and Galveston was pressing her claims as a port through which to reach the high seas.

Colonel Day, of the New Orleans *Picayune*, made a strong speech in favor of commercial and social relations between the South and the West. Mr. D. C. Imboden presented in an able manner the advantages of establishing an outlet at Galveston.

If this object of the convention is attained the city of Wichita hopes to become the center of a very large grain business. A. W. Oliver, the well-known grain man of Wichita, said that one of the obstacles to be met with in establishing a Southern outlet was the danger of holding grain in large quantities at Southern ports. This could be obviated, he said, by establishing a grain center in Wichita, its adaptability being shown by the fact that no other city was ever surrounded by so much wheat grown within such a limited area.

Many other interesting addresses were made, after which the congress effected a permanent organization.

SEED EXPORTS AND IMPORTS.

According to the report of the Bureau of Statistics, seeds valued at \$320,563 were exported during March, against an amount valued at \$273,725 exported in March, 1893; and during the nine months ending with March seeds valued at \$7,703,395 were exported, against an amount valued at \$3,496,069 exported during the corresponding months ending with March, 1893.

Clover seed aggregating 2,245,024 pounds was exported during March, against 415,698 pounds in March, 1893; and during the nine months ending with March 44,755,905 pounds, valued at \$4,479,932, were exported, against 7,766,421 pounds, valued at \$933,157, exported during the nine months ending with March, 1893.

Cotton seed amounting to 55,900 pounds was exported during March, against 247,723 pounds in March preceding; and during the nine months ending with March 5,331,476 pounds, valued at \$40,993, were exported, against 3,845,355 pounds, valued at \$29,454, exported during the corresponding months preceding.

Faxseed aggregating 44,190 bushels, valued at \$60,767, was imported during March, against 10,415 bushels, valued at \$14,397, imported in March, 1893; and during the nine months ending with March 167,406 bushels, valued at \$192,962, were imported, against 52,359 bushels, valued at \$72,700, imported during the corresponding months ending with March, 1893. Other seeds valued at \$13,764 were imported during March, against an amount valued at \$32,266 imported during March, 1893; and during the nine months ending with March an amount valued at \$319,393 was imported, against an amount valued at \$427,360 imported during the corresponding months in 1893.

Flaxseed or linseed amounting to 8 bushels was exported in March, against 43,304 bushels exported in March preceding; and during the nine months ending with March 2,047,823 bushels, valued at \$2,426,267, were exported, against 1,666,394 bushels, valued at \$2,000,172, exported during the corresponding months preceding.

Timothy seed aggregating 1,073,635 pounds was exported in March, against 1,705,955 pounds in March, 1893; and during the nine months ending with March 6,987,987 pounds, valued at \$309,422, were exported,

against 4,648,702 pounds, valued at \$304,889, exported during the corresponding months ending with March, 1893.

Other seeds aggregating an amount valued at \$57,099 were exported in March, against an amount valued at \$11,574 exported during March, 1893; and during the nine months ending with March all other seeds valued at \$446,781 were exported, against an amount valued at \$228,397 exported during the corresponding months ending with March, 1893.

LOCATIONS FOR FACTORIES.

The name of the Chicago, Milwaukee & St. Paul Railway has long been identified with practical measures for the general upbuilding of its territory and the promotion of its commerce, hence manufacturers have an assurance that they will find themselves at home on the company's lines.

The Chicago, Milwaukee & St. Paul Railway Company owns and operates 6,150 miles (9,900 kilometers) of railway, exclusive of second track, connecting track or sidings. The eight states traversed by the lines of the company, Illinois, Wisconsin, Northern Michigan, Iowa, Missouri, Minnesota, South Dakota and North Dakota, possess, in addition to the advantages of raw material and proximity to markets, that which is the prime factor in the industrial success of a territory—a people who form one live and thriving community of business men, in whose midst it is safe and profitable to settle. Many towns on the line are prepared to treat very favorably with manufacturers who would locate in their vicinity.

Mines of coal, iron, copper, lead and zinc, forests of soft and hard wood, quarries, clays of all kinds, tanbark, flax and other raw materials exist in its territory in addition to the vast agricultural resources.

A number of new factories have been induced to locate—largely through the instrumentality of this company—at towns on its lines. The central position of the states traversed by the Chicago, Milwaukee & St. Paul Railway makes it possible to command all the markets of the United States. The trend of manufacturing is westward. Nothing should be permitted to delay enterprising manufacturers from investigating. Confidential inquiries are treated as such. The information furnished a particular industry is reliable. Address

LUIS JACKSON,
Industrial Commissioner, C. M. & St. P. R'y,
425 Old Colony Building, Chicago, Ill.



BUFF COCHIN EGGS FOR SALE.

Pure-bred Buff Cochin Eggs for sale. Address
M. E. BLATCHLEY & Co., White Hall, Ill.

GAS ENGINE SALESMAN WANTED.

Wanted—An enterprising salesman and hustler on gasoline engines and general machinery. Address
E., care AMERICAN ELEVATOR AND GRAIN TRADE, Chicago.

LINENOID SEAMLESS BASKETS.

Wanted—Every grain dealer to write for price list of our seamless baskets. Large sizes mounted on wheels. Samples sent on approval. Address
CRAIN BROS., Linenoid manufacturers, Westfield, Mass.

GRAIN TESTERS FOR \$7.

We will continue to sell 2-quart grain testers at \$7 cash with order. Every one guaranteed to be the Standard Winchester bushel. Over 100 were sold in December and January. We guarantee satisfaction and will refund money on return of tester if not satisfactory. Address

A. S. GARMAN & SONS, Akron, Ohio.

POSITION AS HEAD MILLER WANTED.

Anyone desiring to secure the services of a thorough, reliable and competent head miller in a mill of from 100 to 500 barrels' capacity, and who can go well recommended and can furnish first-class references and will guarantee satisfaction in every particular, can secure the same by writing to me. The reason I am out of employment is that A. P. White & Co.'s mill-dam washed out March 20, and it will be late in the fall before it can be rebuilt. Address

A. SEELINGER, Cadiz, Ky.

POSITION AS FOREMAN WANTED.

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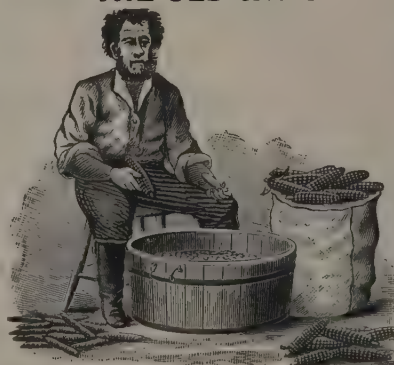
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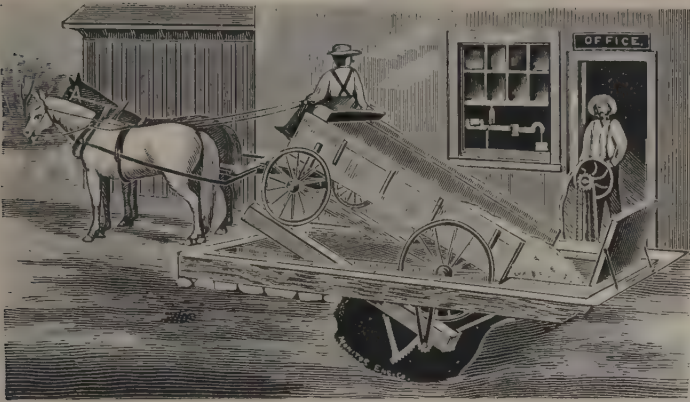
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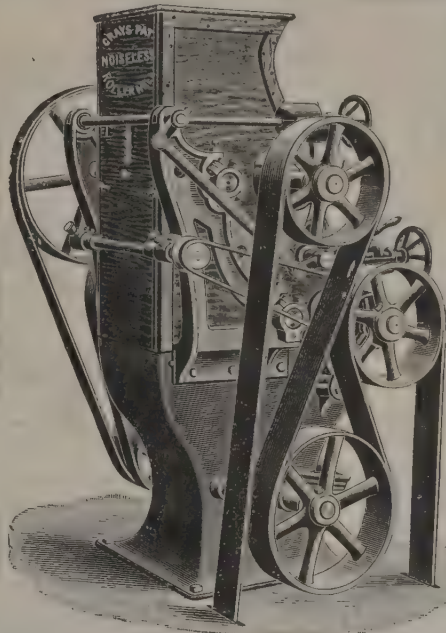
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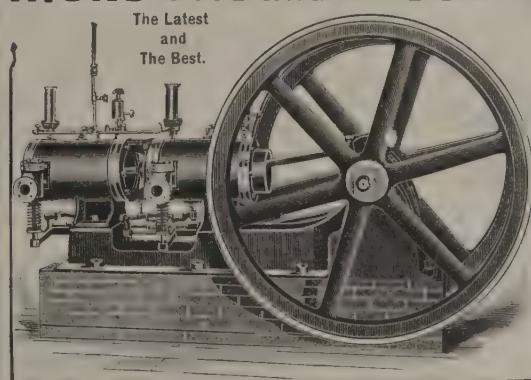
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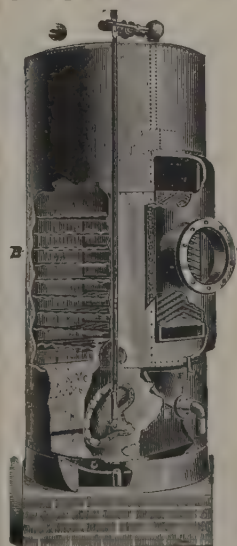
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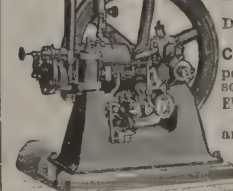
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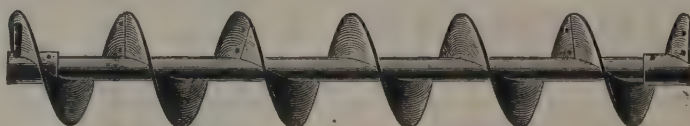
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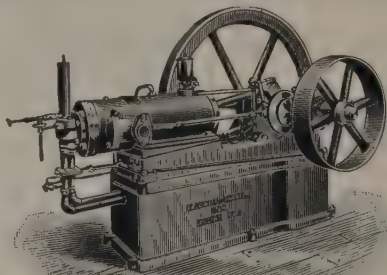
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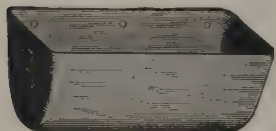
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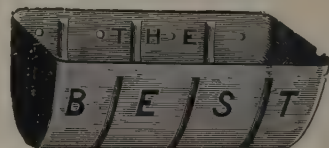


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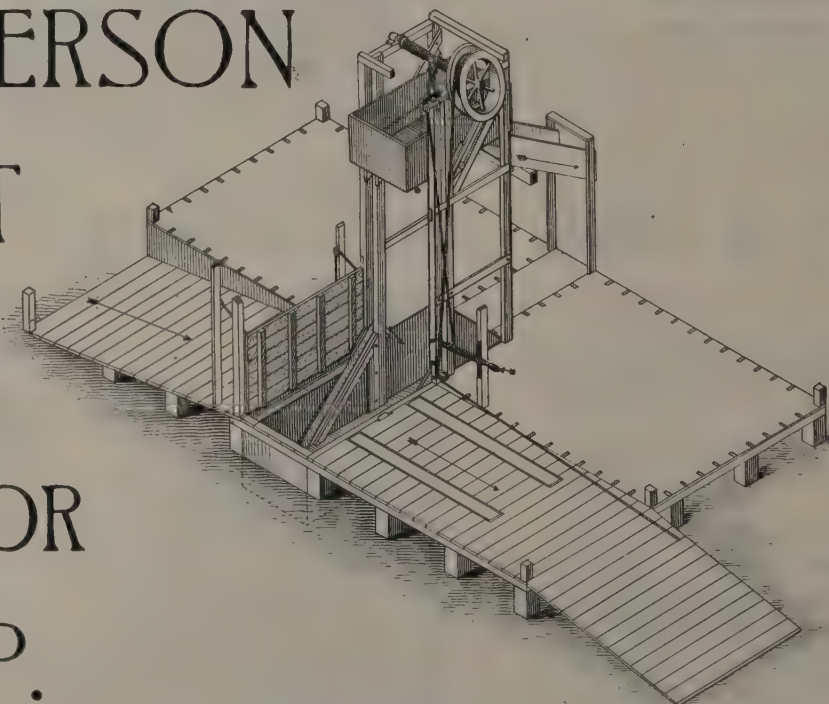
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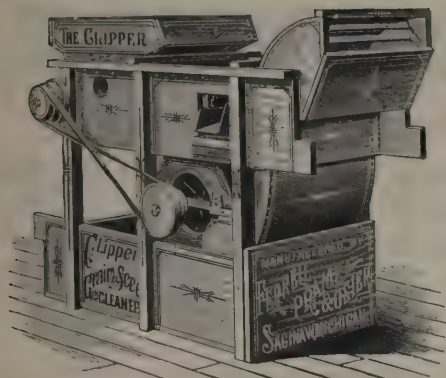
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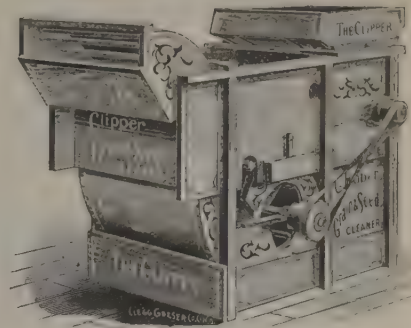


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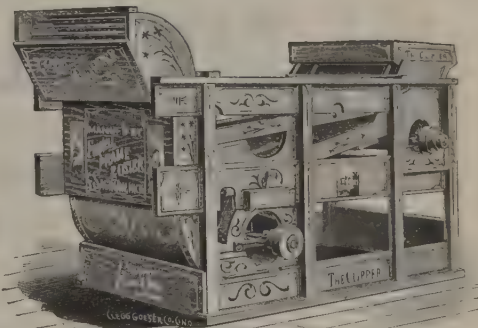
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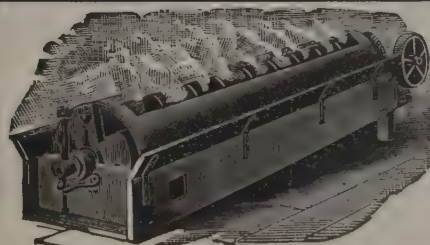
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Plans, specifications and estimates furnished on short notice.

Our Single Leg Rope Drive reduces fire risk and friction.

The Simpson Double Jointed Distributing Spouts economize space and labor.

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SEELEY, SON & CO.,

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OF ALL KINDS OF

GRAIN ELEVATORS.

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Patentee of the only MECHANICAL Mixing device On the Market.

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WILL YOU BUILD?

Then build an elevator that will not fall down. Do not trust everything to country barn builders. Get working plans from professional designers of grain elevators, who have made a study of every strain an elevator is subjected to, of economy in building material, economy of space and of power. It will save you money. We have had 21 years' experience. Address

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ENGINES AND BOILERS.

To get most reliable and best power for least money, send for pamphlet and state your wants to
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SPRINGFIELD, OHIO, or 110 Liberty St., N. Y. City.



DUST PROTECTOR.

The "Perfection" keeps poisonous dust out of the lungs. Of great value to everybody working in dust. Decidedly the neatest, handiest and BEST APPEARING. Postpaid for one dollar. Circulars free. Agents wanted.
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RAILROAD WORK AND HEAVY STRUCTURES,
ST. LOUIS AND BUFFALO.

Construction Department—Work in 1893.

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1,750,000-bushel Elevator, with three Marine Elevating Towers, for the Eastern Elevator Co., at Buffalo, New York.
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Just contracted for 1,000,000-bushel Elevator for the Coatsworth Estate, Buffalo, New York.

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Shops and 40 Stall Round House for Baltimore & Ohio S. W. R. R. Co., at Chillicothe, Ohio.
Freight Depot for the Louisville & Nashville R. R. Co., at St. Louis, Missouri.
Railroad Shops for the C. C. & St. L. R. R. Co., at North Linndale, Ohio.
Fifteen (15) Passenger Stations in Ohio for the Baltimore & Ohio S. W. R. R. Co.

MISCELLANEOUS:

Power House for the Cataract Construction Company, at Niagara Falls, New York.
Barrel Warehouse for the Victoria Milling Company, at St. Louis, Missouri.

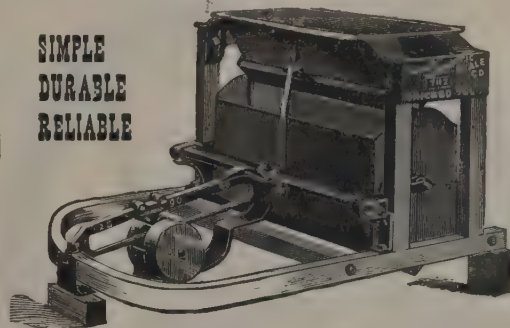
500,000-bushel Elevator for the Orthwein Bros Commission Co., at St. Louis, Missouri.
250,000-bushel Elevator for George Urban, jr., and others, at Ordway, Colorado.
100,000-bushel Elevator for Missouri Pacific Railroad Co., at Coffeyville, Kansas.

Little Miami Freight Depot for the Pennsylvania R. R. Co., at Cincinnati, Ohio.
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Eight (8) Stall Round House for Ohio & Mississippi Railroad Co., at Cincinnati, Ohio.

Bonded Warehouse for the Ravenswood Distilling Company, at St. Louis, Missouri.
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AUTOMATIC SCALES FOR GRAIN, MALT, ETC.

SIMPLE
DURABLE
RELIABLE



WARRANTED TO

Weigh Accurately
Register Correctly

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Work Continuously

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GET OUR
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PRICES

ROLL & CAP STEEL.....
STANDING SEAM.....
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CONDUCTORS &c.....

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GRAIN ELEVATOR MACHINERY AND CORN MILLS.

COMPLETE OUTFITS FOR FLOUR MILLS, HOMINY MILLS AND ROLLER PROCESS CORN MILLS.

MEAL AND GRAIN DRYERS.

Horse Powers, Engines, Pulleys, Belting.

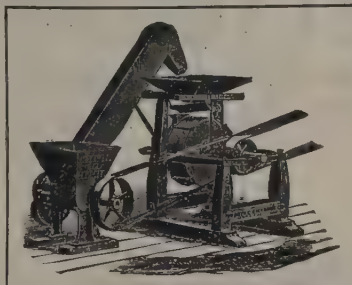
Corn and Wheat Cleaners,

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Hominy Mills, Roller Mills,

Meal Bolts and Purifiers,

And Everything needed in the Handling
and Grinding of Grain.



28 SIZES AND STYLES OF

PORTABLE CORN MILLS,

With or Without Bolts and Crushers.

Received First Premium at Cincinnati, St. Louis, New Orleans, Louisville and Indianapolis Fairs and Expositions.

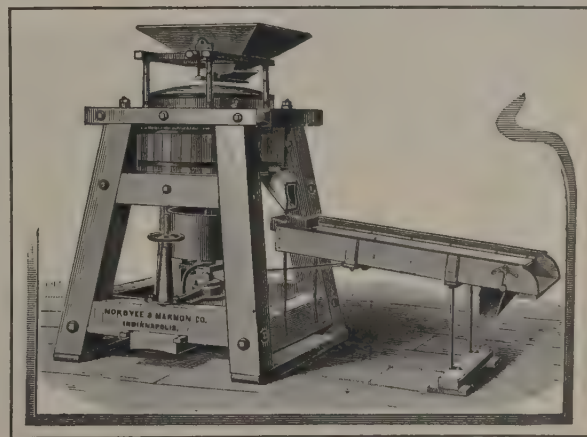
BUY OUR LOW PRICED COUNTRY GRAIN ELEVATORS.

Send \$20.00 for working plans of a 5,000-bushel Grain Elevator costing \$1,000.00, complete with power and machinery, warranted to handle grain faster and cheaper than any other known device. Also, larger sizes the same ratio in price. Catalogue, with plans and full prices of machinery, sent upon application.

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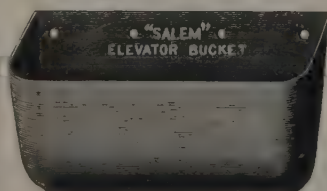
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Gibbs' Patent Dust Protector protects the nose and mouth from inhalations of poisonous dust; invaluable in mills, elevators and every industry where dust is troublesome. Perfect protection with perfect ventilation. Nickel-plated protectors \$1. postpaid. Circulars free. Agents wanted.

Gibbs Respirator Co.,
30-36 La Salle Street, - CHICAGO.

NEVER A PEER



The Salem Bucket has had imitators, but never an equal. The most ever claimed by competing buckets is that they "are as good as the Salem."

We fixed the standard to which others aspired, but the Salem is now, as it always has been, incomparably the

BEST BUCKET MADE.

The BEST is what you want. It is the cheapest and most satisfactory in the end. Besides, the Salem is sold as low as other buckets.



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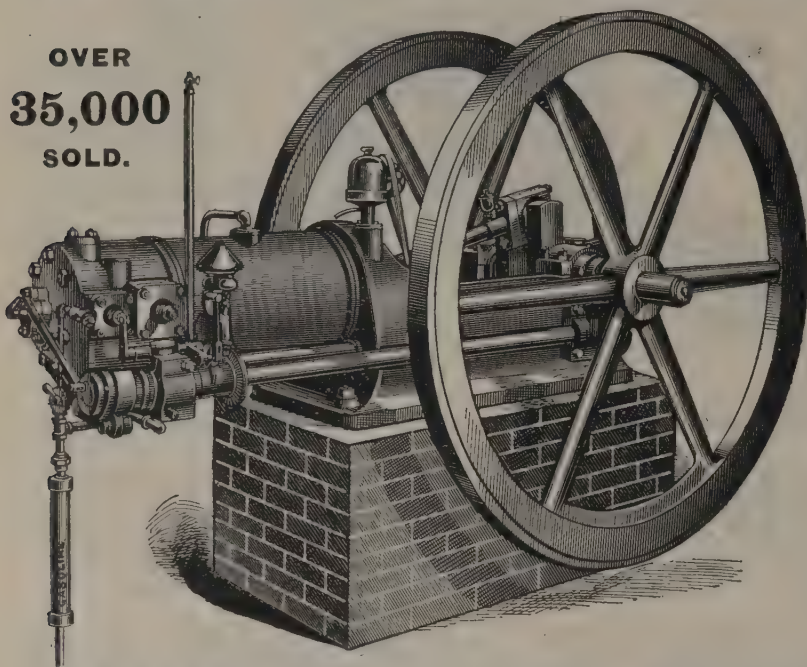
\$1.00 PER ANNUM.

ALL KINDS OF SHEET AND PLATE METAL WORK.

W. J. CLARK & CO., SALEM, OHIO, U. S. A.

The Modern Wonder.

OVER
35,000
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OTTO GASOLINE ENGINE



WORKING WITHOUT BOILER, STEAM, ENGINEER,
COAL, ASHES, OR DANGER.



2 Medals and 2 Diplomas at World's Columbian Exposition, making over 150 Medals and Diplomas in all.

Capacity of Works: 800 Engines per Year.
Sizes: 2 to 60 Horse-Power.

Best and Cheapest Power for GRAIN ELEVATORS,
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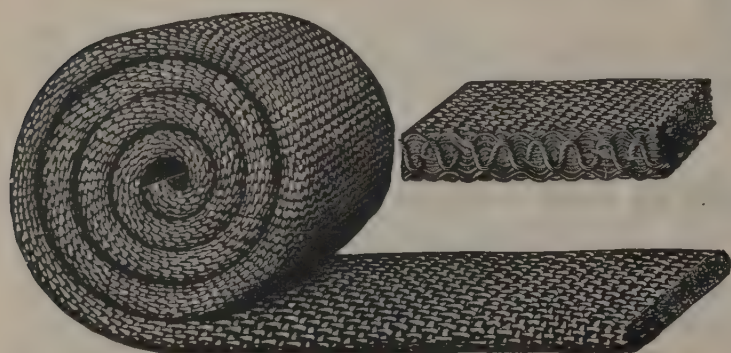
OTTO GAS ENGINE WORKS,

OFFICES: {Thirty-third and Walnut Sts., Philadelphia.
245 Lake St., Chicago.
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THE MADDOX COTTON AND WIRE BELTING

TO TAKE THE PLACE OF LEATHER BELTING.

MADE OF CABLE STEEL WIRE and COTTON WOVEN SOLID TOGETHER.



Is absolutely the strongest, toughest, most powerful, flexible, durable and lasting belting made, without any exception whatever. It is stronger, tougher, more durable, **AND WILL TRANSMIT MORE POWER THAN THE BEST OAK-TANNED DOUBLE LEATHER BELTING MADE. IT WILL NOT STRETCH OR SLIP EVEN WHEN WET. IT IS WATER-PROOF**, and is not affected any by water, steam, dampness, moisture, heat, dryness, oils, grease, acids, chemicals, dust, changes of climate or weather. It will not mildew, crack, or get hard or stiff. Does not require any grease or other belt compositions, nor special care, but will always keep soft and flexible, and in good condition for use. It is cheaper in price than single leather belting, and **50 TO 75 PER CENT. CHEAPER THAN DOUBLE LEATHER BELTING**. It is absolutely superior to all other kinds of belting for **USE IN FLOUR MILLS** and other **CEREAL MILLS**, and all other places where belting of any kind is used. Is guaranteed not to be affected or injured any by flour dust or mill dust of any kind, or by heat or dryness.

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ELEVATOR HORSE POWERS.



*Cheapest,
Most Efficient
and Durable Power
For an Elevator.*

PERFECTLY GOVERNED.

A Steady Motion.

No Skilled Help Required to Operate

For Catalogue, Address
MUSKEGON HEIGHTS, MICH.
Or E. H. PEASE MFG. CO.
RACINE, WIS., Agents.

MORTON MFG. CO.,

PERFORATED METALS

FOR

**Elevators and
Warehouses,**

CORN SCREENS,
WHEAT SCREENS,
OAT RIDDLES,
FLAX REELS,
SEED CLEANERS, ETC.

The Robert Aitchison Perforated Metal Co.,

Room 510, 269 Dearborn St., Chicago.



GRAIN ELEVATOR MACHINERY AND SUPPLIES

OUR SPECIALTY

Is to Furnish Every Description of

MACHINERY OR SUPPLIES

Required for the Equipment or Repairing of

GRAIN ELEVATORS

Such as:

**"SWEEP" and "TREAD" HORSE POWERS,
GAS ENGINES, OIL ENGINES, STEAM ENGINES.**

SHAFTING, PULLEYS, HANGERS,
PILLOW-BLOCKS, CLUTCHES, COUPLINGS,
GEARS, SPROCKETS, SET COLLARS,
TAKE-UP BOXES, CRANE SPOUTS.
LEATHER, RUBBER, COTTON AND LINK BELTING.
"FLEXIBLE" AND "SWIVEL" GRAIN SPOUTS.
ELEVATOR BOOTS, BUCKETS AND BOLTS.
"SPIRAL" AND "BELT" CONVEYORS.
"PLATFORM," "DUMP" AND "HOPPER" SCALES.
GRAIN SCOOPS, AND POWER GRAIN SHOVELS.

—ALL SIZES OF—

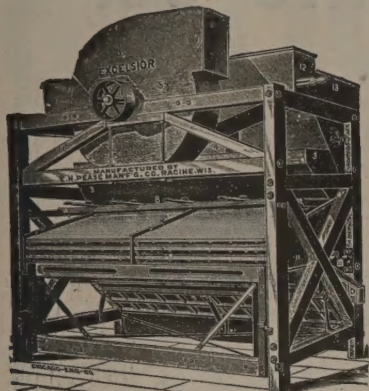
FARM AND WAREHOUSE FANNING MILLS.

GRAIN TESTERS, SEED TESTERS,
PERFORATED METALS, WIRE CLOTH,

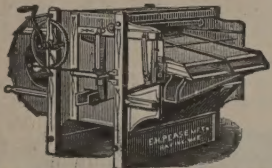
**Power Car Pullers, Oat Clippers, Dustless
Receiving Separators,**

POLISHERS, SEPARATORS, GRADERS,
FLAX REELS AND SPECIAL FLAX MILLS.

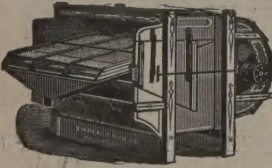
"OVERHEAD," "SWEEP" AND "TREAD" HORSE POWERS,
BAG-TRUCKS, WAREHOUSE TRUCKS, ETC.



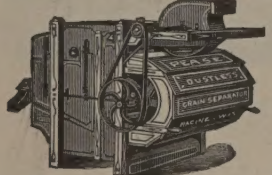
EXCELSIOR DUSTLESS ELEVATOR SEPARATOR,
Cleans, Separates and Grades Perfectly.
HAS NO SUPERIOR IN THE WORLD.



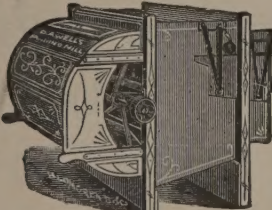
Pease Side-Shake Mill for Warehouses.



Pease End Shake Mill for Warehouses.

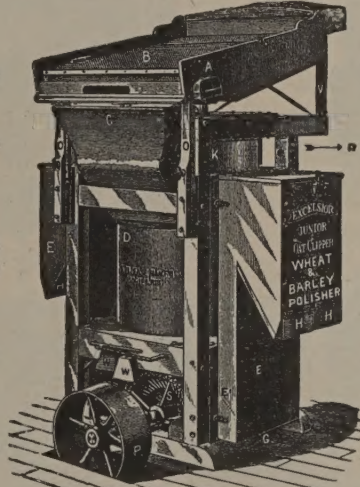


Pease Dustless Separator for Warehouses and Mills.



"Wells" Warehouse Mill.—Extra Large Capacity.

IT WILL PAY
YOU
TO GET OUR
CATALOGUES
PRICES
AND PROOFS OF
SUPERIORITY
BEFORE BUYING
ELSEWHERE.



EXCELSIOR JUNIOR

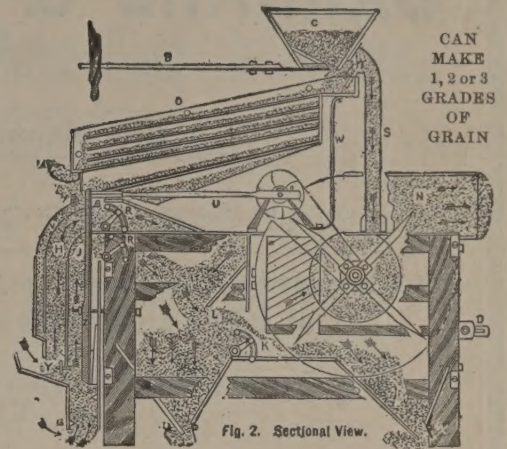
Oat Clipper, and Wheat and Barley Polisher, is the Simplest, Most Compact, **LIGHTEST** Running, Quickest Adjustable Machine of its kind made

WE FULLY WARRANT
THE
SUPERIORITY
OF THE
MATERIALS USED,
THE CONSTRUCTION and
Operating Qualities
OF ALL OUR
MACHINERY.

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LETTERS CAREFULLY

—TO—



CAN
MAKE
1, 2 or 3
GRADES
OF
GRAIN

Fig. 2. Sectional View.

EXCELSIOR SEPARATOR AND GRADER.

The Finest Wheat or Barley Machine on Earth



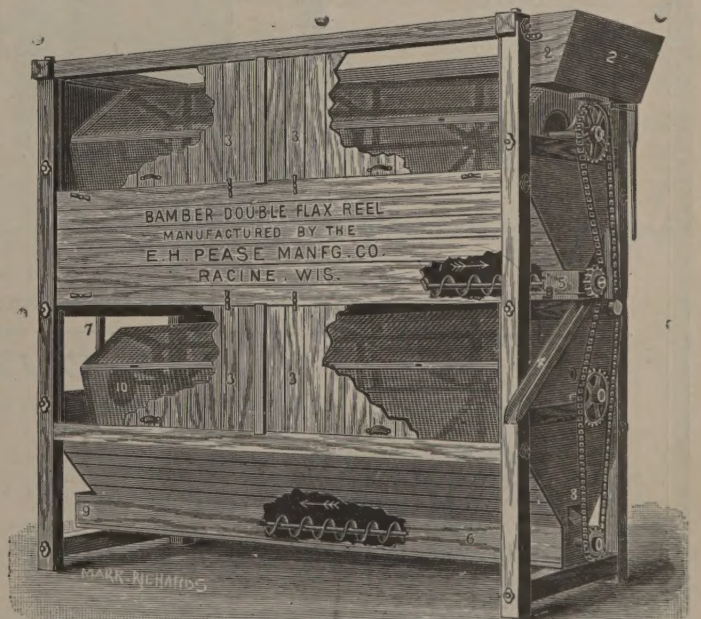
**SAFEST,
MOST DURABLE
—AND—
POWERFUL PULLER
KNOWN.**

HANDLES 1 to 20
Loaded Cars at once
on STRAIGHT and
LEVEL TRACK
and pro-rata on
GRADES and
CURVES

"HERCULES" POWER CAR PULLER.

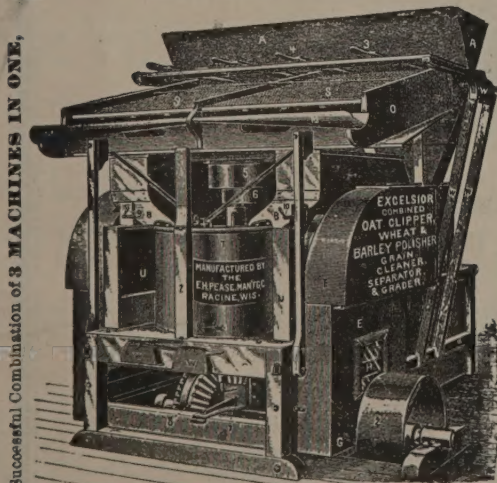
OUR FLAX REELS

Are Adopted and in more General Use by
THE MOST EXTENSIVE FLAX HANDLERS
Throughout the United States, than any similar Machines made



Made with 1, 2 or 4 Reels in one Chest, and with or without
Scalping Shoe."

Reels of any desired style or dimensions made to order.



EXCELSIOR COMBINED

Oat Clipper, Polisher, Separator, Grader and General
Dustless Elevator Separator.

This Machine has no Legitimate Rival in the World.
Send for particulars.

E. H. PEASE MFG. CO., RACINE, WIS., U. S. A.

BRANCH OFFICE, No. 6 CORN EXCHANGE, MINNEAPOLIS, MINN.

FAMOUS HAND OR POWER CLEANERS COUNTRY ELEVATORS.

The Successful Combination of 3 MACHINES IN ONE.

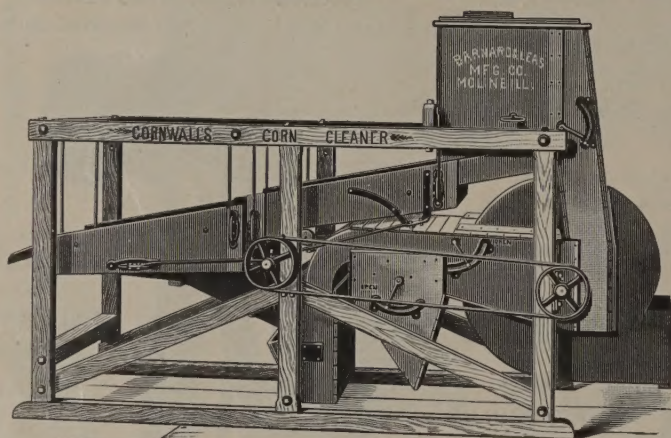
BARNARD & LEAS MANUFACTURING CO., MOLINE, ILLINOIS.

Sole Manufacturers of Barnard's Grain Cleaning Machinery.

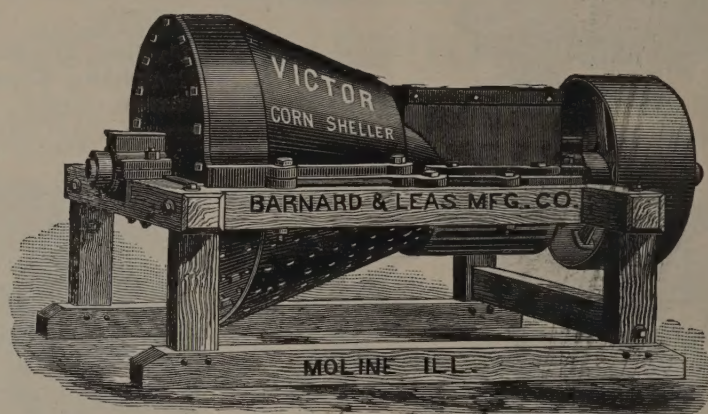
See these machines at work before purchasing.

The Barnard Grain Cleaning Machinery is built in a greater number of sizes, in a greater number of styles, and for a greater variety of uses in the mill and elevator than any other.

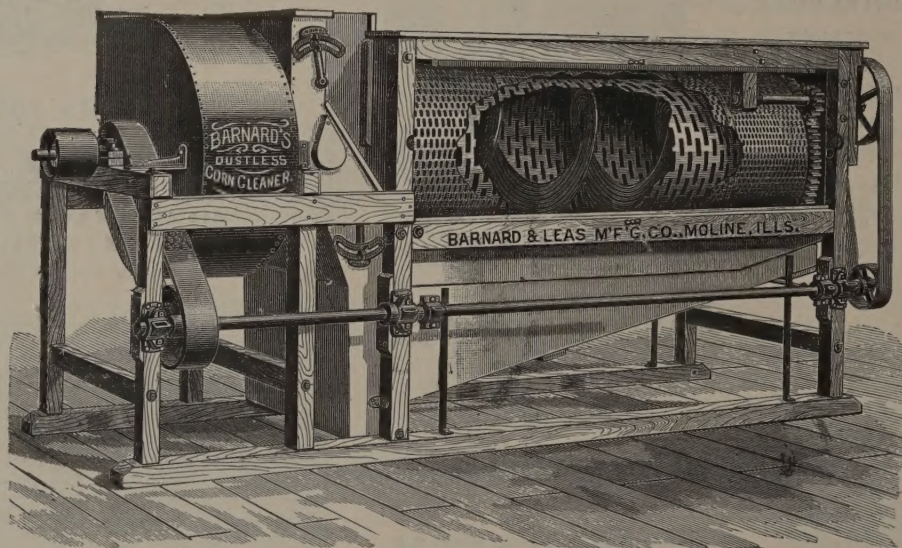
105 Barnard Cleaners were sold during the month of June for mills to be built and remodeled by us, for Elevators and Warehouses and incidental sales.



Cornwall Corn Cleaner.



Corn Sheller.



Double Screen Corn Cleaner.

SEND FOR SPECIAL CATALOGUE OF ELEVATOR MACHINERY.

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NOTICE!

Important Decision Affecting Elevator Men and Furnishers Who Use or Make Dust Collectors.

The Hon. Judge Grosscup of the Circuit Court of the United States for the Northern District of Illinois, on May 9th, 1894, sustained the validity of the dust collector patents known as the **Cyclone**, and ordered a **permanent writ of injunction** against defendants, and that the complainant recover from the defendants the **profits** received from the infringement, together with **damages** which the complainant has sustained by reason of the infringement. Infringing machines involved in these suits were built by the Vortex Dust Collector Co. of Milwaukee and Huyett & Smith, Michigan, who themselves assumed and conducted the defense, through their own attorneys.

This decision covers all types of dust collector of the Cyclone or tapering wall pattern. Therefore, **the only dust collector** of this sort which can be made, sold or used, without danger of damages for infringement, is the **CYCLONE**,

Special Notice.

While we do not desire to make trouble for our friends, the millers of the United States, who have been our customers in the past, we must call their attention to this fact, in justice to ourselves. The Cyclone Dust Collector and the idea and pattern of this style of collector is OUR INVENTION. We have spent thousands of dollars in defending our right to this patent, in the courts of the United States and England. The defense has been carried to the very last courts and **IN EVERY CASE, WITHOUT EXCEPTION**, our rights have been maintained by judicial decision and judgment given in our favor. **THEREFORE**, we must and will call a halt on pirates and the users of piratical machinery, and we warn the trade thus frankly and publicly against the manufacture, sale or use, of infringing machines, and it will be our duty to prosecute such infringements of our rights to the fullest degree and in the promptest manner.

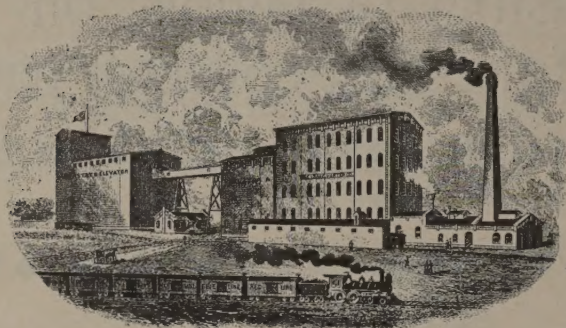
THE KNICKERBOCKER CO.,
Jackson, Michigan.

Made by **The Knickerbocker Co., Jackson, Mich.**

THE MONITOR GRAIN CLEANERS

Superior to Anything Ever Offered!

The most perfect Flour Mill on Earth, located in the center of the best Wheat district on the Continent.



CAPACITY 1500 BBLs EVERY 24 HOURS

BRANDS

HARTER'S AND
GOV. FOSTER'S JESSIE
IMPERIAL
TRUE BLUE
SENECA CHIEF

CHALLENGE
PEERLESS
SNOW BLOSSOM
GOLD DUST
GENERAL FAVORITE

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ISAAC HARTER, Vice Pres.
A. MENNEL, Sup't
W. C. BROWN, Treas.
W. F. DAY, Secy



Fostoria, Ohio, U.S.A. April 12th 1894

Huntley, Cranson & Hammond,
Silver Creek N. Y.
Gentlemen:

The two Monitor Grain Separators bought of you two years ago have been in constant use in our Interstate Warehouse and have cleaned over three million bushels of wheat since first started; we are pleased with the machines as they do their work well and have large Capacity

Yours Truly,

The Isaac Harter Co.
A. Menzel, Vice Pres.

Addressed

COMMENT IS UNNECESSARY.

If you are interested in Flax Cleaners write us. Full particulars on application.

HUNTLEY, CRANSON & HAMMOND, Silver Creek, N. Y.

B. F. RYER, General Agent, 799 West Monroe Street, Chicago, Ill.